

Climate Tech Finance Impact Assessment

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Strategic Plan Commitment 1.07.03-New Climate Solutions

Bay Area Air District

CLIMATE TECH FINANCE

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1 Executive Summary

1-Executive Summary

The Climate Tech Finance (CTF) Impact Assessment provides a comprehensive evaluation of the CTF Program's evolution, performance, and strategic role in accelerating climate technology deployment and advancing access to capital. Established in 2018 as the Bay Area Air District's (Air District) first loan guarantee initiative, CTF was created to address a critical market gap: early- and growth-stage climate technology companies often struggle to secure traditional financing due to technology risk, limited operating history, or insufficient collateral. Through a partnership with the California Infrastructure and Economic Development Bank (IBank), CTF leverages public credit enhancement to de-risk private lending and mobilize capital for climate-aligned projects.

This assessment fulfills the Bay Area Air District's Strategic Plan directive to evaluate and strengthen the Program's effectiveness in achieving measurable climate and community benefits. The report provides an overview of the Program's structure, including its technical review process, social equity review, and lender engagement model. It examines demand trends, including deal size, sector distribution, technology maturity, and applicant equity stage, offering insight into how the Program aligns with California's broader climate innovation ecosystem.

CTF Impact Highlights (July 2021- June 2025)

$42.07 million in loans supported (17 loans)

Star sectors: Energy (53% of total) & Mobility (35% of total)

490 green jobs created

3.5 million metric tons carbon dioxide equivalent ($MTCO_2e$) projected reduced through 2029

Equivalent to greenhouse gas (GHG) emissions from **9 natural gas fired power** plants (annual); or **3.5 million acres of U.S. forests** sequestering carbon for a year

$1 : $97 ratio of public dollars invested in the administration of the CTF Program to projected future savings from avoided climate damages based on estimated GHG reductions[1]

From July 2021 through June 2025 (FY 2022-FY 2025), the CTF Program supported 17 loans totaling over $42 million in financing. Projects supported through these transactions are projected to reduce approximately 3.5 million $MTCO_2e$ emissions by 2029.

The assessment also reviews changes in the financial landscape, including tightening federal funding, shifting lender risk appetite, and banking consolidation. In this environment, CTF plays an increasingly catalytic role by bridging the "missing middle" between grant funding and traditional commercial debt. Through loan guarantees, independent technical evaluations, and lender coordination, the Program increases lender confidence and supports companies transitioning from early commercialization to scalable deployment.

[1] For more information on Social Cost of Carbon ($SC\text{-}CO_2$) assumptions underpinning these estimates, please refer to Chapter 4- CTF Program Outcomes and Impacts .

Stakeholder feedback from surveys, interviews, Board discussions, partners' roundtables, and community engagement underscores the importance of flexible capital, clear communication, strong lender partnerships, and alignment with community priorities. The assessment concludes with targeted improvements to strengthen equity-centered financing, enhance operational efficiency, refine intake processes, expand mission-oriented partnerships, and support longterm sustainability. These suggested improvements are summarized below in Table 1. All suggested strategies should be considered suggestions, with feasibility of implementation contingent on future staff bandwidth and Program resources.

Overall, the findings demonstrate that CTF remains an effective, impact-driven program that mobilizes private capital, accelerates emissions-reducing technologies, supports job creation, and advances equitable climate outcomes across California.

TABLE 1: CTF IMPROVEMENT STRATEGIES SUMMARY (SUGGESTED)

Improvement Type	#	Strategy Name	Implementation Timeline (Proposed)
Centering Social Equity (Equity)	E-1	Increase Engagement with Underrepresented Entrepreneurs & Improve Overall Outreach	Near-Term Achievable
	E-2	CTF Impact Portal Webpage	Near-Term Achievable
	E- 3	Waive CTF Fee in Assembly Bill 617 (AB 617) Communities	Mid-Term Ambitious
	E- 4	Establish New Community Partnerships	Mid-Term Ambitious
	E-5	Partnership with Community-Development Financial Institution (CDFI)	Long-Term Aspirational
	E- 6	Increase Loan Guarantee Percentage to 90% for Underserved Communities (Pilot)	Long-Term Aspirational
	E- 7	Pilot Climate Equity Finance Initiative	Long-Term Aspirational
One Air District	O- 1	Strengthen Implementation Alignment with the Bay Area Regional Climate Action Plan (BARCAP)	Near-Term Achievable
	O- 2	Establish a Climate Tech Nexus	Near-Term Achievable
Improved Application Process	AP-1	Update Climate Technology Definitions	Near-Term Achievable
	AP-2	Improve Entrepreneur Demographics Tracking	Near-Term Achievable
	AP-3	Include Equity Questions in Phase 2 Tech Review	Near-Term Achievable
	AP-4	Increase Customer Service and Transparency- New Self-Screening & Deal-Tracker Tools	Mid-Term Ambitious
	AP-5	Establish Refundable Intake Commitment Fee	Mid-Term Ambitious



2 Overview

2-Overview

Purpose of this Impact Assessment

Since its inception as the Air District's first loan program to help entrepreneurs scale up climate technologies, the CTF Program has been effective in supporting and accelerating climate tech solutions to meet the climate crisis. The CTF Program aligns with the Air District's mission to "improve air quality to protect public health, reduce historical and current environmental inequities, and mitigate climate change and its impacts," by accelerating climate technologies that produce benefits for overburdened communities. The CTF Program helps to achieve the Air District's 2024-2029 Strategic Plan Goal 1 Achieve Impact, the Goal 1 objective to "mitigate climate change and its impacts," and Strategy 1.7 New Climate Solutions to "develop new regional solutions for climate change and support partners to advance climate change mitigation." Under Strategy 1.7, the Strategic Plan specifically calls for an assessment of the CTF Program to continue to improve the Program and grow its climate benefits for communities. This impact assessment is being written to fulfill that directive and to identify areas for future improvements.

Given the CTF Program's consideration of equity and overburdened communities in reviewing proposals through the Program's Social Equity Review, the Program also aligns with the Strategic Plan core values of environmental justice and equity to "integrate environmental justice principles within all aspects of our work" and to "seek enhanced environmental justice outcomes for overburdened communities" and by committing to equity in Program implementation. The CTF Program also helps to implement the Community Advisory Council's (CAC) environmental justice priorities which were developed to direct the Air District in advancing and addressing environmental justice within all aspects of its operations. Specifically, the CTF Program strives to advance environmental justice through highlighting CTF proposals with benefits to overburdened communities and implementing environmental justice best practices through the Social Equity Review.

The CTF Program compliments the Air District's regional climate action planning work, including the Bay Area Regional Climate Action Plan (BARCAP), and grant programs targeting GHG reductions, by accelerating the development of new solutions for climate change mitigation. As the only loan program at the Air District, the CTF Program fills an important gap in furthering climate change mitigation by leveraging and enhancing the Air District's climate planning and grantmaking programs to improve air quality and combat climate change. The CTF Program's work to accelerate climate technologies is a crucial piece of the Air District's work to meet State and international climate change goals, reduce pollution in overburdened communities, and avoid the worst impacts of climate change.

The last CTF Program assessment, completed in 2020, evaluated the early design, launch, and initial performance of CTF Program with a primary emphasis on its first financial products, particularly direct loans to public entities and the initial deployment of loan guarantees to support early-stage climate technologies. It examined the Program's foundational public-public partnership between the Air District, IBank, and one pilot Financial Development Corporation (FDC) – Northern California Small Business Financial Development Corporation (Nor-Cal FDC); assessed early market demand, pipeline development, and lender engagement; and documented early outcomes such as project examples, projected greenhouse gas reductions, job creation, and leverage of public funds. The assessment also highlighted early lessons on capital access gaps, lender risk mitigation, and opportunities to strengthen and scale the Program over time.

This assessment focuses on loan guarantees, Program activity since the initial report, and explains how the CTF Program operates, including its partnership model. It reviews Program impacts such as greenhouse gas reductions, loan activity, market demand, and supported technology sectors, and examines CTF's role within California's evolving climate finance landscape. The assessment also considers equity and community impacts and concludes with case studies and recommendations to strengthen the Program and maximize climate and community benefits.

History of the Program

The California Legislature created the Air District in 1955 as the first regional air pollution control agency in the country. The Air District is tasked with regulating stationary sources of air pollution in the nine counties that surround San Francisco Bay: Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, southwestern Solano, and southern Sonoma counties. The Air District improves air quality to protect public health, reduce historical and current environmental inequities, and mitigate climate change and its impacts.

The Air District has long recognized that climate change is not only an environmental threat but a direct air quality challenge for the Bay Area. Rising temperatures, longer wildfire seasons, and more frequent extreme weather events worsen particulate matter pollution and disproportionately impact overburdened communities. Overburdened communities, as defined by the Air District's Regulation 2-1-243, include census tracts that are at or above the 70th percentile in CalEnviroScreen 4.0, or within 1,000 feet of any such census tract, as shown in the Air District's overburdened communities mapping tool. The Air District understands that meeting State and international climate goals requires more than traditional regulation. Among other tools, there is a need to mobilize capital at a scale far beyond what public agencies can achieve alone, to accelerate the development and adoption of new climate technologies.

As the Air District examined how regional government could play a catalytic role in this transition, one need became increasingly clear: early-stage climate companies lacked access to the financing required to deploy and scale their solutions. This funding gap slowed the development of technologies essential to long-term air quality protection and deep decarbonization. The CTF Program was created to address this barrier and to support the climate innovations necessary for a cleaner, healthier, and more resilient Bay Area.

The Air District established the CTF Program in 2018 to scale up technologies that reduce GHG emissions. At the time, the Air District had decades of experience administering voluntary grant incentive programs to accelerate the adoption of technologies to reduce air pollutant emissions, but not a lot of experience with loans or loan guarantee programs. Loan guarantees provide an opportunity to expand the scope of the Air District's incentive portfolio, reach a new audience to spur technology development and deployment, and provide a tool that can be more self-sustaining than grant programs, as loan funding can be reinvested after its repaid. The CTF Program is based on a loan incentive structure with a mission to reduce GHGs that offsets risk for lenders and increases access to capital for entrepreneurs. A loan guarantee does not provide money directly to the borrower; rather, it helps a lender feel more comfortable making a loan by reducing the lender's potential loss if the borrower defaults. In this way, CTF helps address a common financing gap for climate technology companies that are beyond the earliest startup stage but not yet ready for conventional lending.

The Program is administered through an innovative collaboration between the Air District and the IBank and is designed to leverage the scientific and air quality knowledge of the Air District,

with the financial expertise of IBank, to accelerate the deployment of cutting-edge climate technologies in California.

In 1968, the State of California received seed money to create the Small Business Finance Center Small Business Loan Guarantee Program (SBLGP) to help reduce unemployment by supporting entrepreneurship and small businesses. The Small Business Finance Center, hosted under IBank, promotes statewide economic development by increasing opportunities for entrepreneurs, the self-employed, microbusinesses, and small business owners and ensuring better access to capital and other technical resources. The SBLGP is designed to help small businesses that traditionally experience barriers when trying to access funding. By reducing risk to lenders, the SBLGP gives lenders the confidence they need to lend to small businesses that otherwise struggle to access affordable financing. The Program helps businesses create and retain jobs and encourages investment in low and moderate-income communities.

On August 1, 2018, the Air District Board of Directors authorized the Executive Officer to enter into an agreement with IBank to support the Air District's CTF loan and loan guarantee Program. The partnership with IBank provided up to $2.5 million and 80% loan guarantees for climate-related loans, and the Air District provided an additional 10% guarantee making a total of 90% loan guarantee. On March 3, 2021, the Board of Directors approved an extension of the agreement to continue support of CTF loan guarantees.

As a result of new Federal State Small Business Credit Initiative (SSBCI) funding, the CTF Program expanded from a Bay Area–focused effort to a statewide partnership, with a new fee-sharing structure that helps offset a portion of the Air District's administrative costs. Beginning September 15, 2022, the Air District receives 0.5% of the loan guarantee fee on eligible CTF loans to support the cost of conducting technology and impact evaluations. This fee applies only to loans for which Air District staff performed the evaluation and does not apply to loan refinancings or restructurings of the same project.

This expansion was made possible by the American Rescue Plan Act of 2021, which allocated $10 billion to the SSBCI, of which California received $895 million—roughly five times larger than the previous SSBCI Program in 2010. IBank is a primary beneficiary of these funds and needs to quickly facilitate a large volume of loans through its loan guarantee program. To help enable greater loan activity, IBank increased the loan guarantee maximum from $2.5 million to $5 million per loan. With the new federal funding, the Air District's financial contribution was no longer needed to grow the CTF Program.

Recognizing the opportunity to scale CTF statewide, Air District staff worked with IBank to develop a fee-sharing arrangement to recover a portion of the administrative costs associated with expanded loan guarantee evaluations. On July 20, 2022, the Board of Directors authorized the Interim Executive Officer to negotiate and execute agreements with IBank to implement this arrangement.

The CTF loan guarantee program incentivizes lenders (commercial bank, credit union, Community Development Financial Institutions (CDFI) Fund) to make loans to small businesses by offering guarantees up to 80% of eligible loan amounts. The loans can be up to $20 million, with a maximum guarantee of $5 million and up to seven years term. In the event of a default, following a prescribed process, the lender liquidates the collateral, and then, if the loan still has an unpaid balance, files a claim for the guaranteed percentage of the remaining balance. This process allows lenders to mitigate risk when making small business loans, thereby stimulating the economy with a combination of public/private funds.

How it Works

The Climate Tech Loan Guarantee is open to small businesses developing or deploying technologies that deliver measurable GHG reductions in California. Eligible applicants include small businesses with fewer than 750 employees seeking debt financing for equipment, project implementation, or working capital tied to an emissions-reducing solution. To qualify, participants must demonstrate a clear climate benefit, financial readiness for lending, and a California focus, meaning the proceeds of the loan are spent within the State of California. Eligible technologies span the climate-tech landscape, including solutions that decarbonize transportation, energy, buildings, industry, agriculture, and waste systems. Fossil fuel technologies or projects without quantifiable climate benefits are not eligible.

A loan guarantee helps reduce risk for a lender by backing a portion of a loan. In the Climate Tech Loan Guarantee Program, neither the Air District nor IBank lends money directly to businesses. Instead, the CTF Program helps identify and evaluate eligible climate technology projects, while lending institutions provide the loan and FDCs support the related guarantee process. This structure helps climate businesses access financing they might not otherwise receive. Air District staff working in CTF are skilled in assessing the technical aspects of proposed climate technologies. Through initial engagement from a prospective company, staff complete a climate tech screening to ensure that project applications align with the potential to reduce GHG emissions effectively and have positive social equity impacts. Upon technical approval, staff may complete the first phase of technical review and the Air District may provide companies with a letter of pre-eligibility that recognizes their potential environmental and social benefits. In cases where a company already has an identified lender actively conducting underwriting, this step may be bypassed, and staff proceed directly to Phase 2 technical review. This process is critical for early-stage businesses to gain credibility and for lenders to assess their viability.

For companies that do not yet have a lender, the Program may also help connect them with potential lending partners. As part of this matchmaking function, Finance Leads and Program staff help identify lenders or FDCs that may be a fit based on the applicant’s financing needs, business profile, and stage of development, and help facilitate introductions so the borrower and lender can determine whether a financing opportunity is viable.

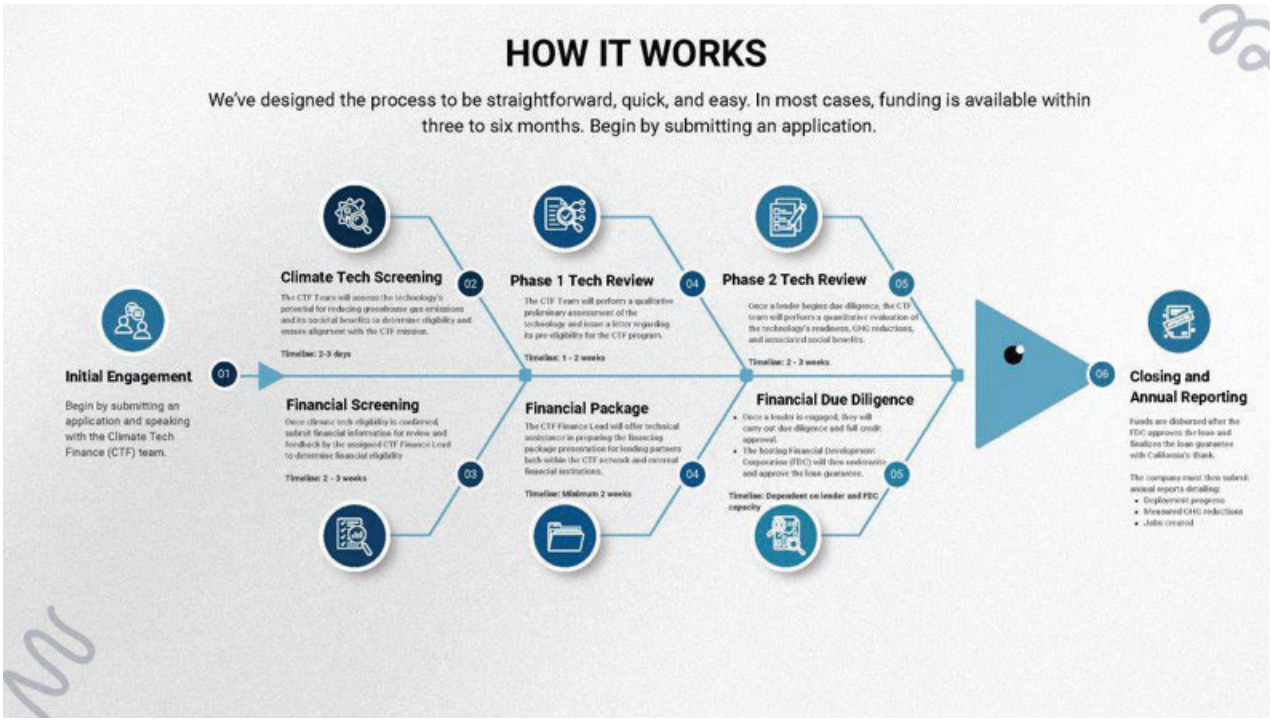
The first phase of technology review assesses a technology's maturity, maintenance requirements, and associated risks, along with its current and expected implementations. The second phase of technical review is the GHG analysis which provides a preliminary estimate of the potential for reducing GHGs, derived from existing and anticipated deployments, without conducting a full life-cycle assessment or in-depth carbon accounting.

The Social Equity Review considers a project’s potential for fostering social equity and benefits to overburdened communities. Social equity is defined as the creation of equal access to opportunities that closes demographic disparities within all areas of the organization and society at large. Utilizing state and federal tools like the United States Census Bureau Census Geocoder to identify census tract ID, California Communities Environmental Health Screening Tool 4.0 (CalEnviroScreen 4.0), the Federal Community Reinvestment Act (CRA), and California Climate Investments priority populations, staff assesses a company’s operations and the product’s impacts on communities that are most burdened by pollution, economic challenges and other population characteristics. By working to highlight and promote overburdened areas, the Air District is encouraging small businesses to consider how deployment of climate technologies may impact overburdened communities, and to partner with communities in planning

deployments to ensure benefits are maximized and any unforeseen burdens are minimized. Additionally, this criteria may incentivize lenders to provide capital to overburdened areas, helping to increase their CRA scores while driving economic development in overburdened communities.

Staff work closely with Finance Leads, consultants with extensive experience in lending and financial markets, who support critical functions of the Program. They complete a financial screening to assess the financial soundness and risk profiles of projects applying for loan guarantees. The Finance Leads prepare the financial package and look at factors like creditworthiness, business plans, and the potential for commercial success, and help facilitate the introduction and early coordination between companies and banks who then complete their own financial due diligence. The team within IBank manages the loan guarantee program, setting the terms for guarantees, approving new lenders, filing applications, and finalizing the guarantees for closing. They work to mitigate financial risks while making capital accessible for climate tech entrepreneurs. Figure 1 provides an overview of the CTF loan guarantee process.

FIGURE 1: CTF LOAN GUARANTEE PROCESS



Partnership with Financial Development Corporations

California's FDCs were created in the California Corporations Code to help the Small Business Finance Center administer its programs throughout the state, removing barriers small businesses face accessing capital. Each FDC is a nonprofit corporation with general responsibilities for marketing and administering Small Business Finance Center programs. As mission-based organizations, the FDCs support small businesses and stimulate economic growth in underserved communities.

There are seven FDCs, shown in Figure 2, with a total of 57 employees who reflect the diversity of California, with 70% identifying as racial and ethnic minority groups and speaking a wide range of languages.

FIGURE 2: FDCS STATE-WIDE OVERVIEW



CTF in the Advisory Role

In addition to providing loan guarantees, the CTF Program plays a critical advisory role in supporting early- and growth-stage climate companies as they navigate the path toward bankable debt financing. For many companies, CTF is their first structured point of contact with public-sector climate finance, and often the first time they receive feedback grounded in real lender expectations.

Today, CTF staff regularly engage with companies that are not yet ready for traditional debt but are actively seeking financial assistance. Through intake conversations, application reviews, and follow-up discussions, the Program provides early, finance-oriented guidance on capital structure, project readiness, revenue predictability, and lender requirements. This advisory engagement helps companies understand why they may not yet be a fit for CTF or commercial lenders, and what concrete steps are needed to progress toward financing eligibility.

When companies are not a fit for the CTF Program, staff aim to be transparent about Program limitations while still being supportive. Rather than simply declining participation, CTF shares relevant, non-exclusive resources within the broader climate and small business ecosystem, such as accelerators, technical assistance providers, and advisory organizations, without endorsing or prioritizing programs in which CTF is not directly involved. This approach helps companies stay within a familiar and credible environment while continuing to mature their projects.

Finance-led guidance is especially critical for early-stage climate companies, many of which have strong technical solutions but limited experience with debt markets. CTF's advisory role helps translate lender perspectives into actionable feedback, including expectations around financial documentation, risk allocation, project structuring, and timing.



3 Our Demand

3-Our Demand

Requested Loans

Demand for CTF has evolved over the years, reflecting both the growing momentum of California's climate technology sector and the state of investment in innovative technologies. In the early years of the Program, data collection on interested companies was limited and largely qualitative. The Program did not yet have a standardized process to capture company characteristics, project details, or financing needs. As the Program matured and prepared for operating statewide, the CTF team refined and expanded the online application to collect more structured and comprehensive information on applicant companies, including technology type, project description, and capital needs. This evolution improved the Program's ability to track demand, assess trends, and evaluate applicant readiness to proceed in the CTF process.

It is important to note that online application data does not represent the full universe of companies interested in or supported by the Program. A portion of companies are referred directly to CTF through various originators such as the Finance Leads, IBank, FDCs, lenders, or through professional networks of CTF staff and partners. These referred companies may enter the Program pipeline through direct outreach and technical or financial screening without completing the online application, resulting in incomplete or inconsistent data for assessing Program demand. As such, online application data should be interpreted as a subset of overall program demand rather than a comprehensive record of all interested or participating companies.

Given these data collection limitations, the analysis presented below in Table 2 focuses on companies that submitted an application through the CTF website. Specifically, the data summarized below represents online applications received during Fiscal Years (FY) 2024 and 2025 (July 1 – June 30). For the purposes of this report, fiscal years are identified by the calendar year in which the period ends; for example, FY 2024 refers to the period from July 2023 through June 2024. While this dataset does not capture all companies referred to or engaged by the program, it provides a consistent and structured basis for evaluating recent demand trends, applicant characteristics, and requested financing levels.

Companies applying to the program through the online application requested a range of loan amounts, reflecting varying stages of technology deployment, company maturity, and capital needs. Loan requests were grouped into the following categories for analysis: under $500,000, $500,000–$1 million, $1–$2.5 million, $2.5–$5 million, and greater than $5 million.

TABLE 2: LOANS REQUESTED VIA CTF WEBSITE (FY 2024 & FY 2025)

Type	FY2024	FY2025
Program Interest Submissions *	54	69
Average Requested Loan Amount*	$3,879,959	$3,289,884
Minimum Requested Loan Amount*	$80,000	$12,000
Maximum Requested Loan Amount*	$30,000,000	$50,000,000
Percent of Requests Under $500K	29.6%	26.1%
Percent of Requests $500K–<$1M	5.6%	14.5%
Percent of Requests $1M–<$2.5M	24.1%	21.7%

Percent of Requests $2.5M–<$5M	3.7%	7.2%
Percent of Requests ≥$5M	37.0%	30.4%
* Values do not include applications where the loan amount was left blank or a value of less than $1,500 was submitted.		

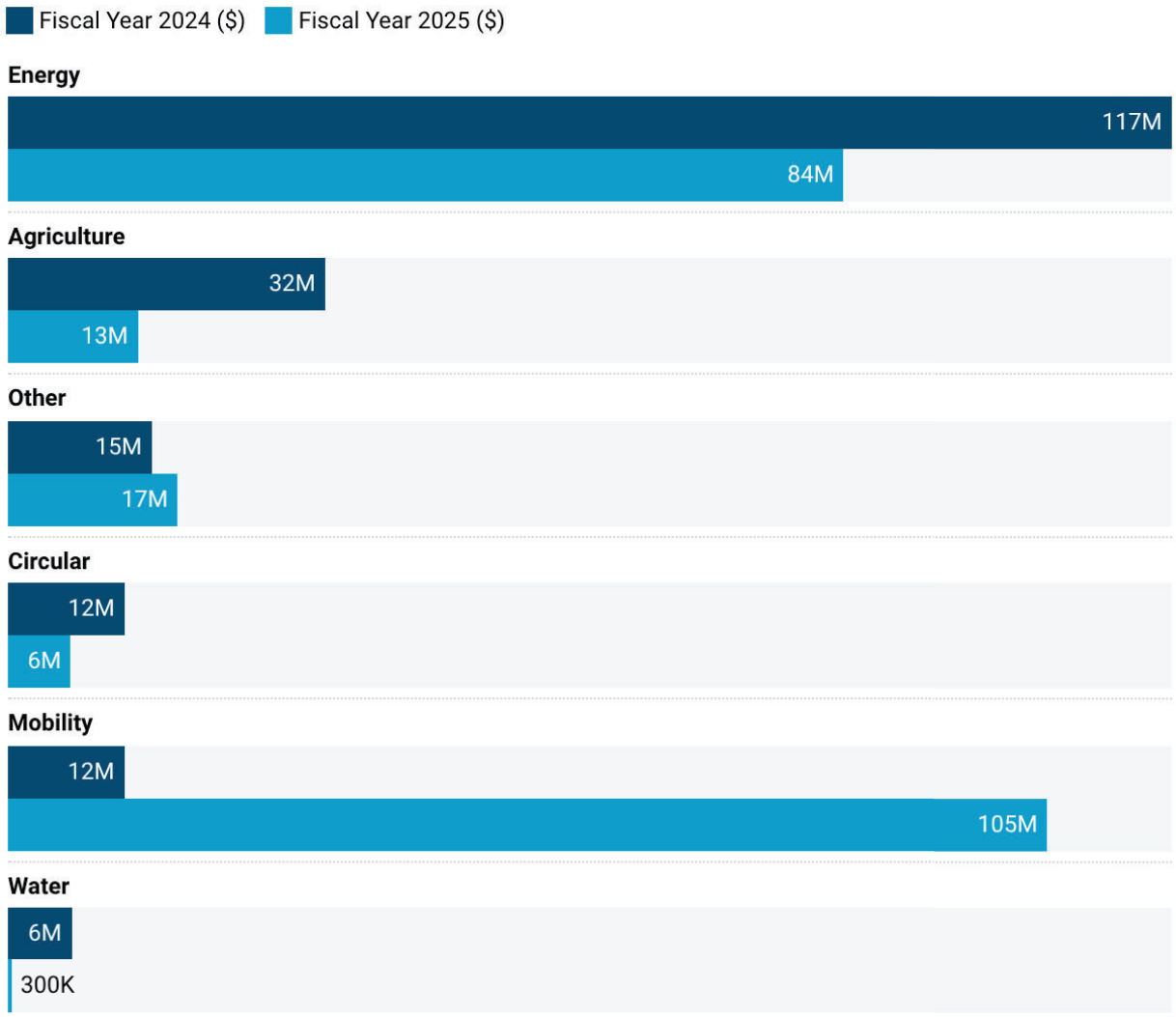
From FY 2024 to FY 2025, online applications increased by 15 submissions and the average loan amount request decreased by $590,075 from $3,879,959 in FY 2024 to $3,289,884 in FY 2025. Across both fiscal years, the highest concentration of requests is for loan amounts greater than or equal to $5,000,000, 37.0% and 30.4% respectively. The second highest request was for loan amounts less than $500,000 (29.6% and 26.1%) and third highest request was for loan amounts of $1,000,000 to $2,500,000 (24.1% and 21.7%). The demand for loan amounts greater than $5,000,000 suggest companies are hoping to leverage the full guarantee of 80% of the loan amount up to $5,000,000 maximum. There is also demand for loan amounts under $1,000,000 (35.2% and 40.6%). Loan amounts less than $1,000,000 are considered small loans to the lender and lenders would prefer to work on larger sized deals, but CTF still presents all deals to potential lenders to gauge interest in the hopes of creating a match for a company and their company. The majority of online applicants requested loan amounts greater than $1,000,000, with a notable share of applicants seeking loans greater than $5,000,000, indicating a growing demand for capital-intensive climate technology innovation and deployments.

Technology Sectors

Over the past two fiscal years, online applications have been received from a diverse range of sectors focused on accelerating the deployment of clean technologies across California. These applications reflect the growing interest and innovation within industries seeking to reduce GHG emissions, improve energy efficiency, and support the state's broader climate goals. The sectors that have applied to the CTF Program include; Agriculture, Circular, Energy, Mobility, Water, and Other.

As described in Figure 3 loan requests from the energy and mobility sectors accounted for most loan demand in FY 2024 and FY 2025, with a notable increase in loan demand from the mobility sector between FY 2024 and FY 2025.

FIGURE 3: ENERGY & MOBILITY SECTORS LED LOAN REQUESTS (FY 2024 & FY 2025)



Among these, the Energy sector has submitted the highest number of online applications between the last two fiscal years (57.1% and 38.7%), and in FY 2024 the Energy sector submitted total loan amount of greater than $117 million. This shifted in FY 2025 as the Mobility sector requested a total loan amount of over $104 million when the Energy sector total loan amount decreased to approximately $84 million. The sector with the lowest number of requests was the Water sector (3.6% and 1.3%), the total requested loan amount between the two fiscal years for the Water sector was $6.4 million and $300,000, respectively.

The Energy and Mobility sectors have demonstrated the greatest success in progressing from initial application to financing closure with a lender. The technologies submitted in these sectors tend to be more mature in the deployment stage with industry acceptance, well-established business models, and clear pathways to profitability. These are factors that increase lender confidence that the borrower can re-pay the loan and align with the financial due diligence required by our partner institutions.

The trends in technology sector requests suggest that technologies with proven emissions reduction potential, tangible deployment pathways, and identifiable end-users are more likely to advance through the CTF pipeline.

Technology Phase

As part of the online application, applicants are asked to identify their company's current technology phase: discovery, research and development, demonstration, early commercialization, or mass market.[2] In both FY 2024 and FY 2025, the largest share of online applicants reported being in the early commercialization phase, accounting for 46% and 47% of applicants, respectively.

Following early commercialization, FY 2024 applicants most commonly identified as being in the mass market phase (19 percent), while in FY 2025 the next largest share of applicants reported being in the demonstration phase. In both fiscal years, discovery represented the smallest share of applicants, which aligns with the CTF Program's focus and strongest performance among early-stage companies that are preparing to commercialize their technologies.

Equity Stage

In addition to identifying their technology phase, applicants are also asked to indicate their company's current equity stage. This information helps provide further context on where applicants are positioned in their growth trajectory and the types of capital they have accessed to date.

Applicants may select from the following equity stages: pre-seed funding, seed funding, early-stage investment (series A and B), later-stage investment (series C, D, and beyond) [3], or "other," with an option to provide additional detail. The equity stage data presented below reflects responses from companies that applied through the online application and offers insight into the maturity and financing readiness of companies seeking support through the CTF Program.

In FY 2024 the equity stage data indicates that the majority of applicants were concentrated in pre-seed funding (33%) and in FY 2025 the highest concentration was in the seed funding stage (35%). In both FY 2024 and FY 2025, the second and third highest concentration for applicants indicated being in the seed funding and early-stage investment (series A and B), reflecting strong alignment with the CTF Program's focus on supporting companies that are beyond initial concept development and are preparing to scale. In FY 2024, approximately 24% of applicants identified as seed-stage companies, while 22% reported being in series A or B. A similar pattern was observed in FY 2025, with 35% of applicants at the seed stage and 29% at the Series A and B stage.

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2 Technology phase classifications are adapted from the U.S. Department of Energy (DOE) Technology Readiness Level (TRL) framework to align with federal standards for evaluating innovation maturity and commercial readiness.

3 Pre-seed funding: The earliest funding, often used to validate the idea and build an initial product. Seed funding: Early funding, often used to launch the company, build a prototype, and gain initial traction. Early-stage investment (Series A and B): Funding used to scale the business, expand operations, and grow the customer base. Later-stage investment (Series C, D, and beyond): Funding used by more established companies to expand significantly, enter new markets, or prepare for an exit.

The equity stage data mirrors the technology phase trends discussed above, reinforcing that the CTF Program is reaching companies at a critical transition point—where access to credit enhancement can help bridge the gap between early commercialization and broader market adoption.



4 Outcomes & Impacts

4- Outcomes and Impacts

The following section examines the tangible outcomes of the CTF Program. This includes a review of loans closed from FY 2022 through FY 2025 and the climate impact potential achieved through funded projects. Together, these metrics illustrate how the program is translating investment into measurable environmental and economic benefits.

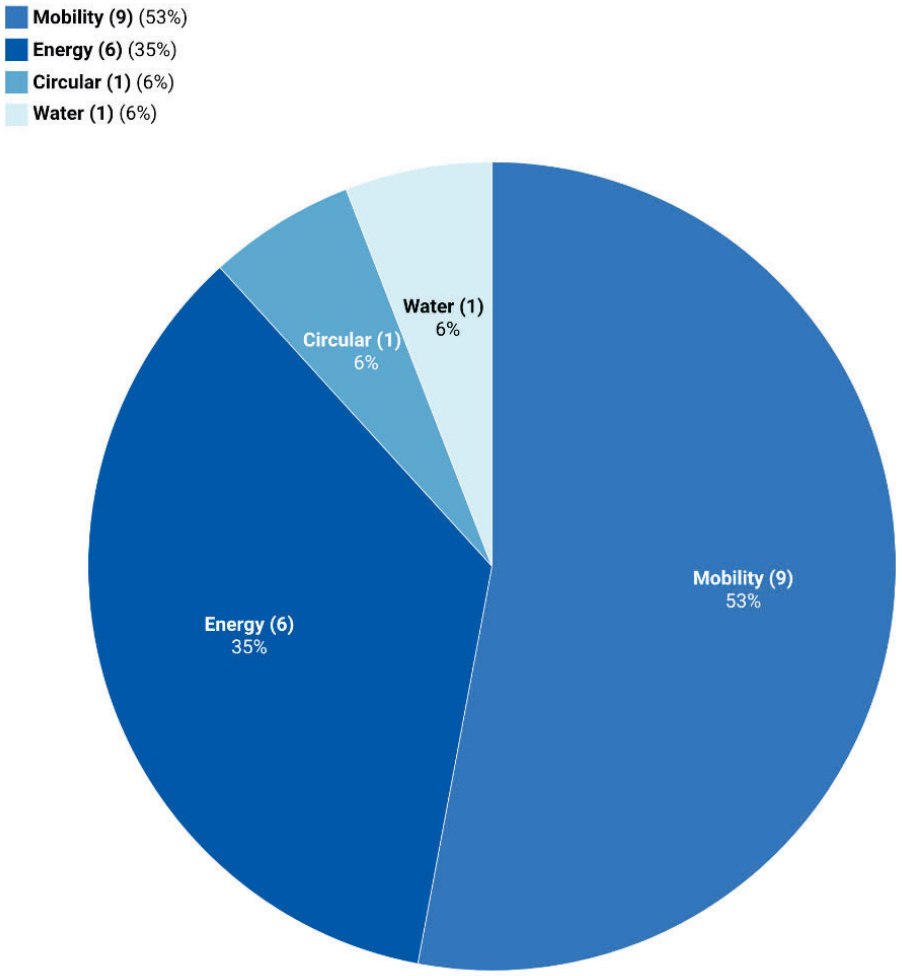
Loans Approved and Climate Impact

From FY 2022-FY 2025 the CTF program supported 17 loans totaling $42.07 million in total loan amount which resulted in the collection of $89,680 in Air District fee revenue. Each loan was issued following CTF's Phase 2 Technical Review, a full evaluation of the applicant's technology including GHG reduction potential, operational feasibility, and community and social equity considerations. These closed transactions reflect the program's ability to move qualified projects from application through evaluation and into execution.

In addition to total loans closed and dollars deployed, the CTF Program tracks the time to move projects from full evaluation to closing in coordination with IBank. This metric helps assess program efficiency and set expectations for applicants and partners. During this period, the number of days between providing a complete evaluation package to IBank and loan closing ranged from 23 days to 661 days (1.8 years), with an average of 180 days (6-months). Once a complete evaluation is submitted, the CTF Program's role in the underwriting and approval process is complete. From that point forward, the timeline to closing is driven by coordination among the lender, the borrower, and the FDC, including lender underwriting, borrower readiness, and final documentation. As a result, variations in time to close reflect deal-specific and partner-driven factors rather than CTF program review timelines.

During this reporting period, staff worked with companies across multiple sectors, including clean energy, mobility, water, advanced materials, and circular economy. Figure 4 shows the breakdown of loan recipients by sector. Out of 17 total loans between FY 2022-FY 2025, most companies identified as energy (35%), or mobility (53%).

FIGURE 4: CTF APPROVED LOAN RECIPIENT SECTOR TYPE (17 TOTAL)



CTF's broad eligibility criteria allow the program to consider technologies that reduce emissions in various ways. Technologies that reduce emissions at their source or reduce GHG emissions from a process, achieve direct reductions. Indirect reductions can be achieved by technologies that support other technologies that directly reduce emissions. Examples of indirect reductions include electric vehicle (EV) charging stations and grid efficiency improvements. The final category of emissions reductions are avoided emissions, where staff consider innovations that prevent future emissions. Examples of avoided emissions innovations include fire prevention technologies. Figure 5 shows the breakdown of direct and indirect emissions reduced from the CTF program for deals closed between FY 2022- FY 2025. GHG reduction models for CTF deals reflect the impact of five years of technology deployment from the date of the loan being finalized, as opposed to the projections for GHG reductions from the lifespan of the deployed climate technology (e.g. an EV could stay operational for 15-20 years). Due to this modeling convention, the GHG reductions shown in Figure 5 should be considered a conservative projection of the climate impact from closed CTF deals.

As shown below in Figure 5 between 2021 and 2029 16 companies are projected to reduce ~3 million $MTCO_2e$ of indirect emissions, and 1 company is projected to reduce ~512 thousand

$MTCO_2e$ of direct emissions. Combined, 17 CTF program companies are projected to reduce ~3.5 million $MTCO_2e$ from 2021-2029.

FIGURE 5: CTF PROGRAM COMPANIES PROJECTED TO REDUCE 3.5 MILLION $MTCO_2E$ (2021-2029)

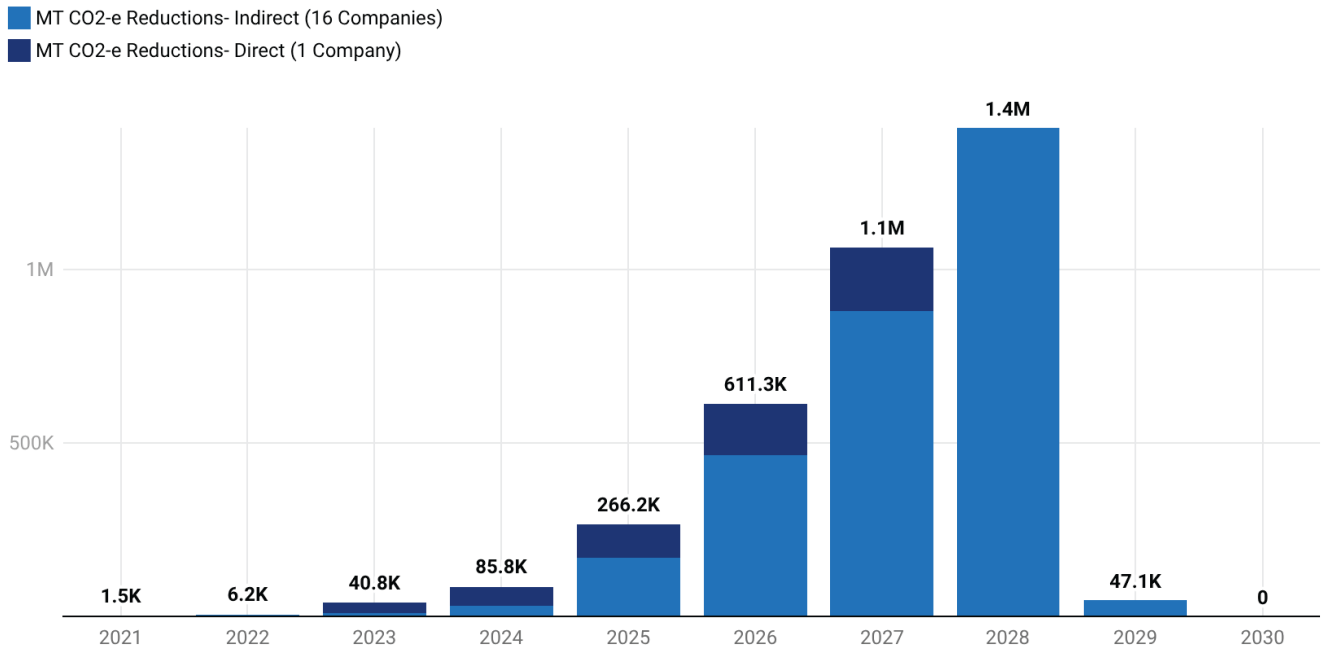
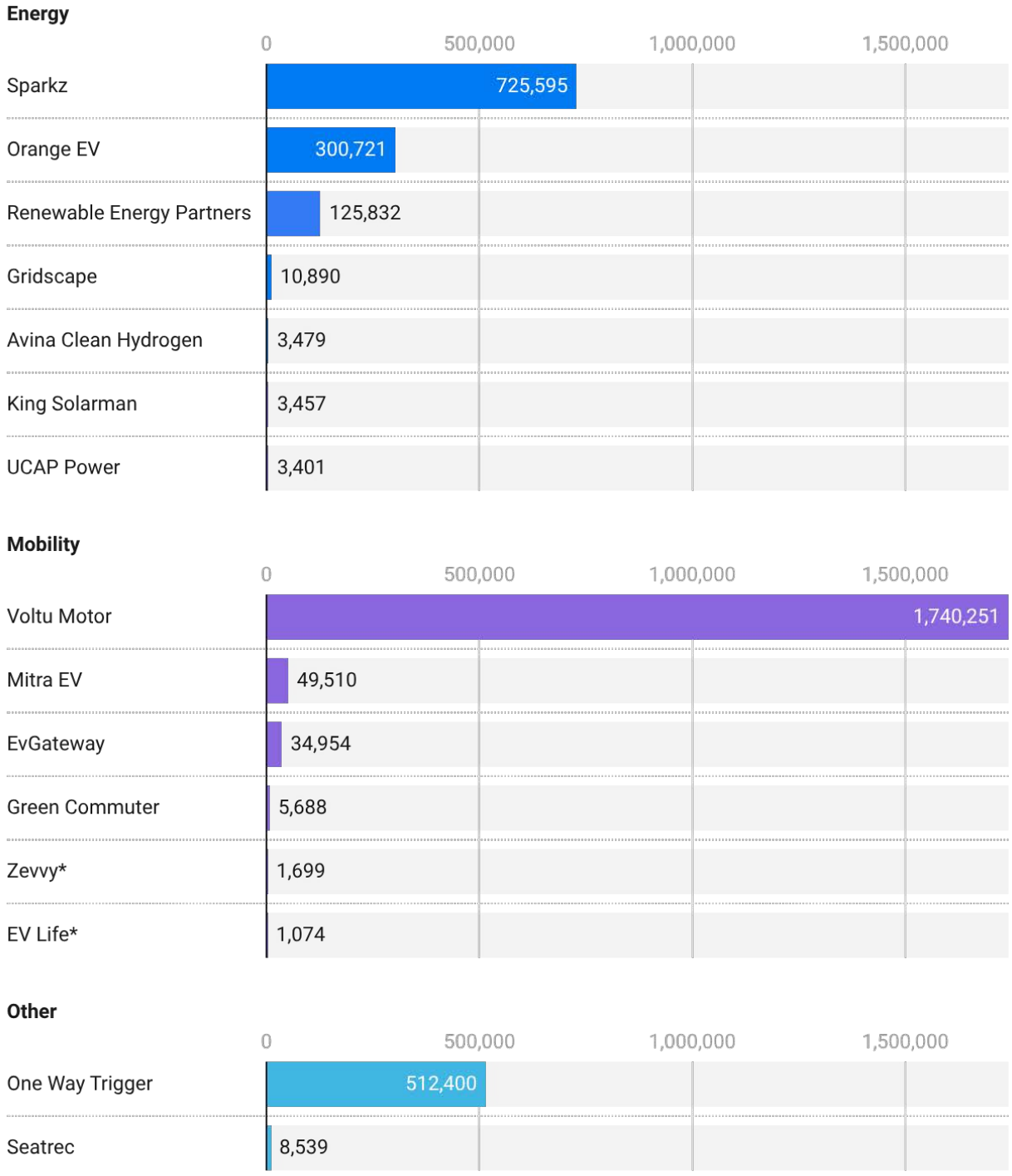


Figure 6 breaks out projected GHG reductions for supported loans in each sector for each company. Note that companies marked with "*" indicate projects where projected GHG reductions were adjusted to reflect company bankruptcy or a change in business model.

FIGURE 6: COMPANIES SUPPORTED (SECTOR)

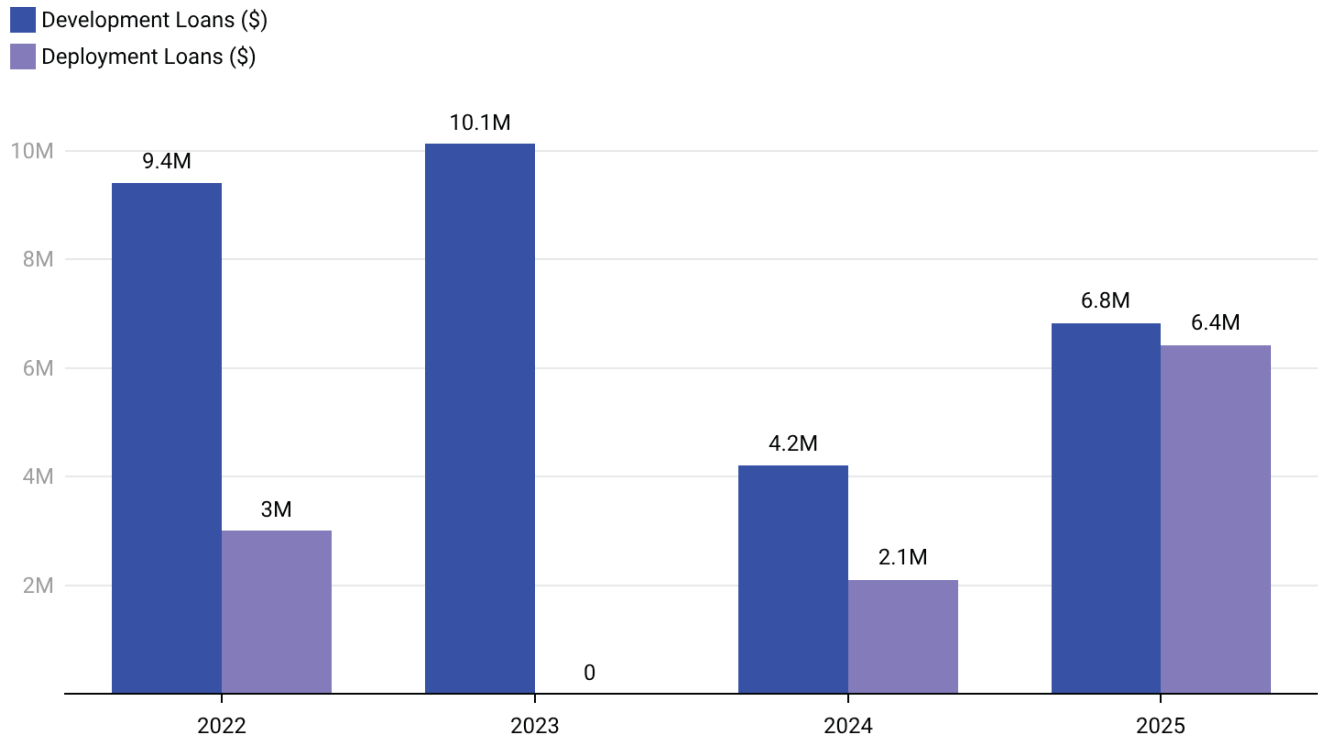


CTF supports both deployment and development projects, each contributing to emissions reductions in different ways. Deployment projects involve the manufacturing, installation, construction, or scaling of known and commercially proven technologies. These projects

generate immediate, measurable GHG reductions and create near-term jobs through manufacturing, installation, and ongoing operations. Deployment projects may also be eligible for additional funding sources, such as grants or incentives, that are not typically available to early-stage development efforts. For example, Green Commuter represents a deployment project, as it expands the use of zero-emission electric vanpools using commercially available electric vehicles to directly displace gasoline-powered commuting trips and reduce near-term emissions. As shown below in Figure 7, 27% of CTF total loans granted during this period, representing 6 out of 17 total deals were allocated to companies/ projects that are considered deployment projects for scaling of known and commercially proven technologies.

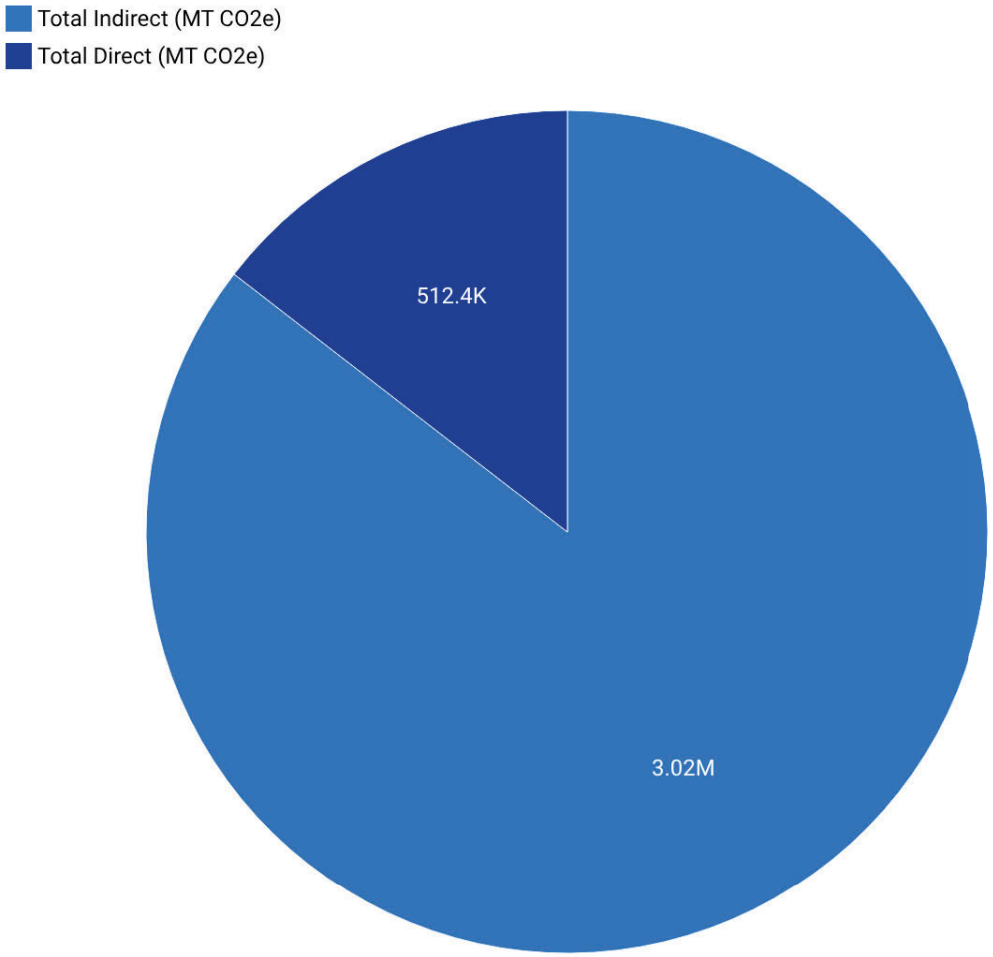
Development projects focus on first-of-a-kind (FOAK) deployments with companies in the early commercialization phase. While their GHG impacts occur later, they are essential for advancing the next generation of climate technologies and creating highly skilled technical and engineering jobs. For instance, Avina Clean Hydrogen reflects a development-stage project, supporting early deployment of green hydrogen production infrastructure that, once operational at scale, has the potential to significantly decarbonize hard-to-abate sectors such as heavy-duty transportation and industrial processes. As shown below in Figure 7, most (73%) of all CTF loans granted between FY 2022 and FY 2025 went to deploying FOAK development projects, representing 10 out of 17 closed deals during that period.

FIGURE 7: 73% OF CTF LOAN $ SUPPORTED FIRST-OF-A-KIND PROJECTS (FY 2022-FY 2025)



Based on applicant data and Air District technical assessments, supported projects are expected to reduce over 3.5 million $MTCO_2e$ by 2029, averaging approximately 705,000 $MTCO_2e$ per year, as shown below in Figure 8. This level of reduction is roughly equivalent to removing 823,000 gasoline cars from the road for a year, or taking 9 natural gas-fired power plants offline for a year.

Figure 8: Over 3.5 Million $MTCO_2e$ Projected Reduced (2021-2029) - Direct & Indirect Emission %



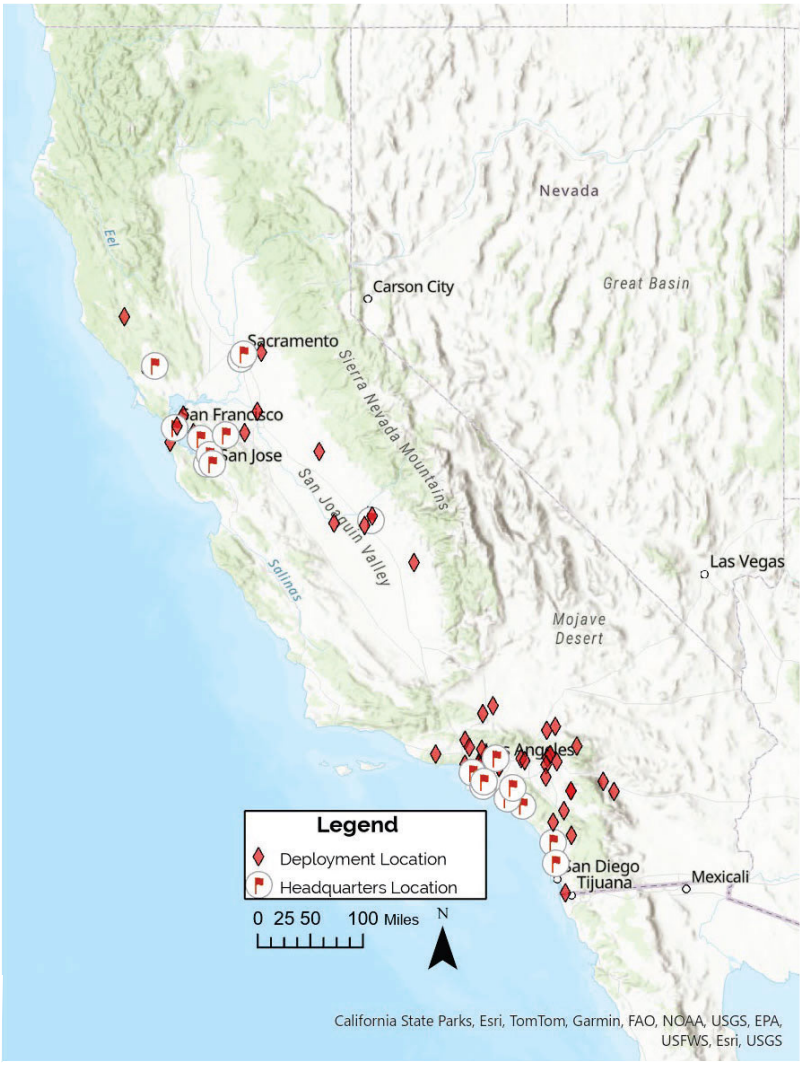
The current CTF pipeline represents a significant capital commitment, with projects averaging $60M in total loan value. These initiatives are currently advancing through various stages of the funding lifecycle including financial review, strategic structuring, and formal underwriting as they move toward final due diligence and closing with a lender.

Social Equity Impact of the Program

Social Equity Review

The Air District is committed to advancing social equity within the climate tech sector and through the CTF Program. The Social Equity Review is a core component of the CTF Program's assessment process and reflects the Air District's commitment to ensuring equitable access to the benefits of emerging climate technologies. The Social Equity Review assesses how proposed climate tech solutions may advance social equity and benefits to overburdened and low- and moderate- income communities, such as cleaner air, expanded access to climate technologies, partnerships, and jobs. By examining where projects are headquartered, where solutions will be deployed, and who stands to benefit from deployment, as depicted below in Figure 9 , the Social Equity Review helps to direct climate investments to communities who have historically faced disproportionate pollution burdens and economic barriers. In addition to Social Equity Review, CTF staff track demographics of entrepreneurs, and include resources in the CTF approval letter outlining best practices for climate tech solution implementation that maximizes benefits for communities.

FIGURE 9: MAP OF CTF COMPANY HEADQUARTERS & T ECHNOLOGY DEPLOYMENTS



Mapping Tools Used in Social Equity Review

When assessing proposed climate tech solutions through the Social Equity Review, CalEnviroScreen 4.0 and the Community Reinvestment Act (CRA) have been the primary tools used to identify whether proposed climate tech solutions are headquartered and/or deployed within overburdened communities, low- and moderate-income communities, as shown in Appendix A.

CalEnviroScreen

CalEnviroScreen 4.0 is a mapping tool that identifies California communities most disproportionately burdened by pollution. CalEnviroScreen 5.0 was released for public comment on January 28, 2026 through April 1, 2026, and will be utilized in place of CalEnviroScreen 4.0 for the Social Equity Review, once finalized.[4] The CTF Program's Social Equity Review considers the overall CalEnviroScreen 4.0 percentile. The Air District's overburdened community definition includes communities that are at or above the 70th percentile in CalEnviroScreen, or within 1,000 feet of any such census tract.

CRA

The CRA was enacted by Congress in 1977 and is intended to encourage depository institutions to help meet the credit needs of communities where they are operating, including low- and moderate-income neighborhoods. Low- and moderate-income neighborhoods are defined by the Community Reinvestment Act as communities with income less than 50% of area median income (AMI), and communities with 50-80% AMI, respectively.

Climate and Economic Justice and Priority Populations

Previously, staff were also utilizing the Climate and Economic Justice (CEJST) screening tool to identify CTF proposals headquartered or deployed in disadvantaged communities. The CEJST screening tool was part of the Justice40 initiative created by Executive Order 14008 under the Biden Administration, to direct 40% of the benefits from certain federal investments to disadvantaged communities. In January 2025, due to changes in the federal administration, CEJST was no longer available, CTF staff added the consideration of California Climate Investments priority populations to the CTF Program Social Equity Review, alongside CalEnviroScreen 4.0 and the CRA. Senate Bill 535 and Assembly Bill 1550 dictate that 35% of California Climate Investments must be allocated to disadvantaged communities and low-income communities and households, collectively defined as priority populations. The priority populations definition relies on the California Environmental Protection Agency's definition of disadvantaged communities (including those at or above the 75th percentile in CalEnviroScreen in addition to other criteria), and low-income communities and households are defined as those with incomes at or below 80% of the statewide median or below a threshold designated as low-income by the Department of Housing and Community Development.[5] A figure showing locations of CTF proposals' headquarters and deployments overlayed with priority populations is not included in this report, given that data collection for this category is still relatively new, and being collected and compiled.

CTF Company Headquarters and Project Deployments in Overburdened and Low- and Moderate- Income Communities

[4] CalEnviroScreen 4.0: https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40
[5] Priority Populations: https://www.caclimateinvestments.ca.gov/priority-populations

For CTF's 17 supported loans closed from FY 2022 through FY 2025 CTF staff have analyzed the percentage of companies headquartered, and projects paid by the loans that are deployed, within communities defined as overburdened, low- and moderate-income. As shown below in Table 3 64% of CTF projects were deployed within overburdened communities, and 58% of CTF projects were deployed within low- and moderate-income communities.

TABLE 3: CTF LOANS (FY 2022 – FY 2025) BENEFITTING OVERBURDENED AND LOW- AND MODERATE-INCOME COMMUNITIES

Community Indicator	% of CTF Companies Headquartered within Community and the Equivalent spent in loan proceeds[6]	% of CTF Projects Deployed within Community and the Equivalent spent in loan proceeds[7]
Overburdened community (70th percentile in CalEnviroscreen or within 1,000 feet of any such census tract)	19% ($3.42M)	64% ($11.76M)
Community Reinvestment Act (CRA) Neighborhoods[8]	Low-income (less than 50% AMI): 6% ($2.00M) Moderate-income (50-80% AMI): 19% ($6.00M) Middle-income (80-120% AMI): 25% ($9.17M) Upper-income (more than 120% AMI): 50% ($18.65M)	Low-income: 29% ($2.11M) Moderate-income: 29% ($8.14M) Middle-income: 33% ($4.60M) Upper-income: 9% ($496K)

CTF Program staff are committed to continuing to increase the percentages of CTF projects headquartered and deployed within overburdened and low- and moderate-income communities, to maximize community benefits and minimize any burdens, in alignment with community needs and priorities. To this end, CTF staff have included in this assessment an evaluation of community priorities to date that align with the CTF program, collected through the Community Investments Office (CIO)'s survey and grant program, as well as the AB 617 Community Emissions Reduction Plans (CERPs). In addition, CTF staff will conduct outreach and pursue

6 Of the 17 loans supported between FY2022 and FY2025, there are 18 headquarters locations. 16 of these headquarters are located in California and were included in the social equity analysis. Loan proceeds represent the total principal amount received by each company.
7 Deployment locations were not specified for all applications. For analysis purposes, loan proceeds are assumed to be distributed equally across all identified sites. Data reflects information provided at the time of application and is subject to update.
8 Community Reinvestment Act Neighborhoods: https://www.federalreserve.gov/consumerscommunities/cra_resources.htm#lmi

community partnerships to ensure CTF project deployments located within overburdened and low- and moderate-income communities align with community priorities.

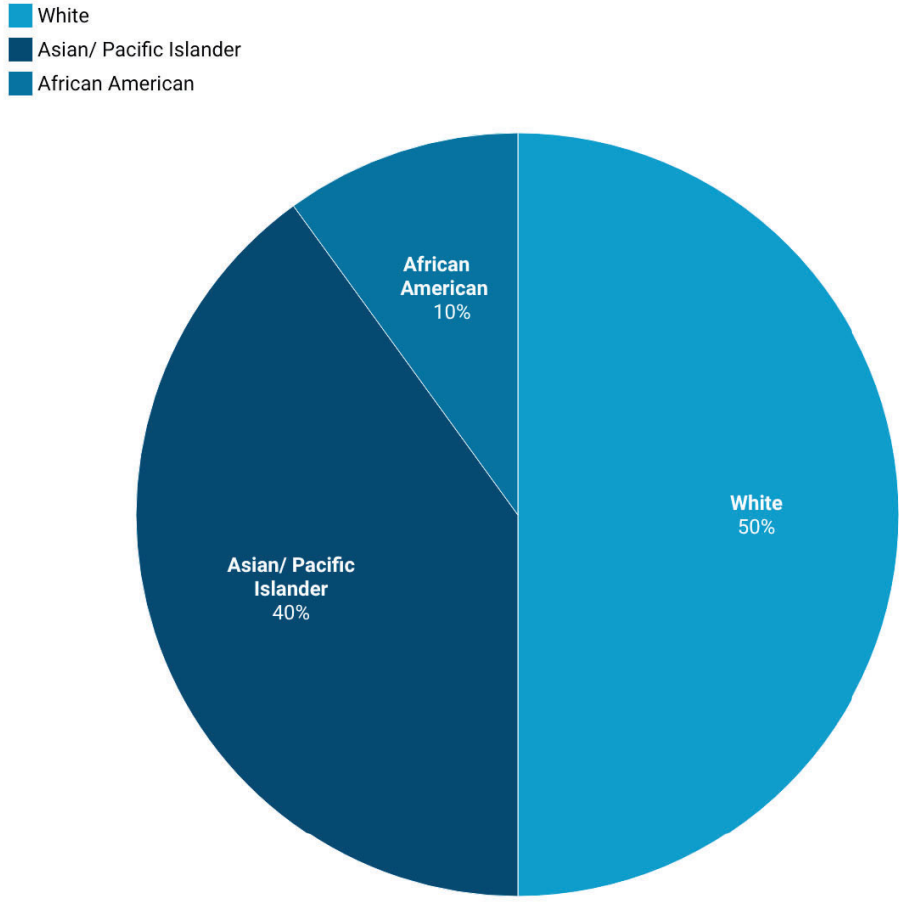
Demographics of CTF Entrepreneurs and Trends

In addition to Social Equity review, and consideration of the locations of CTF project headquarters and deployments, CTF Program staff also track the demographics of CTF entrepreneurs, to ensure the CTF Program is serving underrepresented entrepreneurs.

Out of 17 loans from 15 different companies for which the CTF Program collected demographics data upon closing of the loan on companies' CEOs from FY 2022-FY 2025, twelve companies responded regarding their gender, nine male and three female. Though, from 2023 to 2024, we see a slight increase in female CEOs (from 13% to 18% of CEOs) and a slight decrease in male CEOs (from 87% to 82% of CEOs), compared to the total number of CEOs enrolled in the CTF Program. Out of the ten companies' CEOs that responded regarding their race, the responses were: one Black or African American, one Asian-Other, one Asian-Pacific Islander, one Asian-Chinese, one Asian-Indian, and five White, as shown below in Figure 10- note that Asian and Pacific Islander has been combined into one category in the data visualization. Out of the eleven companies that were asked about the ethnicity of their principal owners, two responded that they are Hispanic or Latino/a. Similar to gender, we see race trending in a more diverse direction, with a 12% decrease of white CEOs from reporting companies from 2023 to 2024, and a 13% increase of Black, Indigenous, and People of Color (BIPOC) CEOs from reporting companies from 2023 to 2024. Out of the eleven companies that were asked about their minority and/or women owned or controlled business status, five responded that they are minority-owned or controlled, and three responded that they are women owned or controlled. Out of the total 17 loans the CTF Program supported from FY2022-FY2025, there was a total of 490 expected jobs created. Out of the eleven companies that were asked, two indicated that they were implementing their climate tech solution within an energy- or climate-impacted community. The U.S. Department of Treasury defines an energy- or climate-impacted "community facing local job losses or business revenue declines due to physical or transition impacts from climate change, including shifts in energy production."[9]

[9] U.S. Department of Treasury: https://home.treasury.gov/system/files/136/SSBCI-Reporting-Guidance.pdf

FIGURE 10: RACE/ETHNICITY OF CTF CEOS (10 RESPONDENTS)



The CTF Program strives to continue to increase the diversity of entrepreneurs enrolled in the CTF Program, as well as continue to expand outreach to small businesses and entrepreneurs within overburdened and low- and moderate-income communities. Moving forward, the CTF Program plans to pursue community outreach, and targeted partnerships, with organizations that are within and representative of overburdened and low- and moderate-income communities.



5 Financial Sector

5-Financial Sector

Changes in Financial Landscape

The CTF program does not operate in a silo and is highly responsive to shifting market conditions. Because of how the program is structured, its success is closely tied to lenders' appetite to finance specific climate sectors and the projects within them. The following sections outline the current market environment and highlight major events and trends that have shaped the landscape over the past four years.

Overview of Market Conditions

The current macroeconomic environment remains highly volatile, with uncertainty surrounding future interest rates, inflation levels, and the possibility of a recession. The federal administration is making significant budgetary, organizational, and strategic shifts, while also signaling additional changes that contribute to nationwide and global economic uncertainty. It is possible that short-term interest rates may decline modestly, followed by higher rates in the longer term due to expected inflationary pressures and a slowing economy. Recent declines in job growth already point toward the risk of a broader economic downturn.

Public funding for climate-related companies has fallen sharply, driven primarily by federal policy and budget constraints. The State of California stands out as a partial exception, continuing to invest aggressively in climate initiatives as part of its commitment to statewide net-zero goals.

In contrast to the tightening public sector landscape, private funding for climate-related companies has remained steady and, in some cases, increased. Family offices, private equity firms, and private lenders continue to be active, and a growing number of banks are creating specialized lending divisions focused on technology and climate technology sectors.

Key Events and Their Impact

The 2023 Silicon Valley Bank (SVB) collapse initially created a sharp freeze in technology lending, but activity recovered quickly once it became clear that SVB's underlying loan portfolio was sound and unrelated to the failure. Since then, lending in the broader tech sector has continued to accelerate, including, by SVB itself, which now operates as a largely freestanding unit under its new parent company. Despite this rebound, lenders remain highly cautious toward early-stage and climate-technology deals, a pattern that has long been the norm.

At the same time, ongoing bank consolidation has reduced the number of institutions willing to support small, complex, or early-stage financings. As banks grow larger and aim to serve increasingly sophisticated clients, they standardize and routinize credit and underwriting processes. This shift often pushes smaller businesses and especially early-stage climate tech projects out of major banks' lending strategies.

Federal investment during 2021-2022 expanded significantly with the passage of three major laws: the Inflation Reduction Act (IRA), the Infrastructure Investment and Jobs Act (IIJA), and the CHIPS and Science Act (CHIPS). These initiatives spurred a surge of private and public capital into clean energy, zero-emission transportation, grid modernization, and domestic manufacturing, fueling what many described as a climate tech boom. As these programs mature, however, most large federal allocations have already been committed, and few new

initiatives are coming online. While some targeted or bipartisan opportunities remain, the overall availability of new federal support for climate-technology deployment has begun to narrow.

Trends in Lending Behavior

Lenders show a strong appetite for early-stage financing in key industrial and climate-related sectors, provided the deal is structured well and clearly highlights the borrower's strengths. Lenders look for indicators such as sufficient runway, demonstrated market demand, and a capable, responsive management team. Although many early-stage companies show limited or unprofitable operating history, most traditional banks exclude these profiles automatically. However, specialized and well-capitalized banks with industry expertise are more willing to consider these borrowers because they have the portfolio capacity to absorb higher-risk clients without jeopardizing reserves or regulatory standing.

To date, the CTF Program has been successful in matching early-stage climate tech borrowers with appropriate lending partners. Most banks that have participated in lending through the program have remained active, and overall interest in the climate tech sector continues to rise. This is driven by growing public awareness of the risks associated with rising CO_2 emissions and the increasing financial burden of fossil fuel–based energy. While lender caution will persist, interest is expected to continue growing in response to long-term energy needs and market demand.

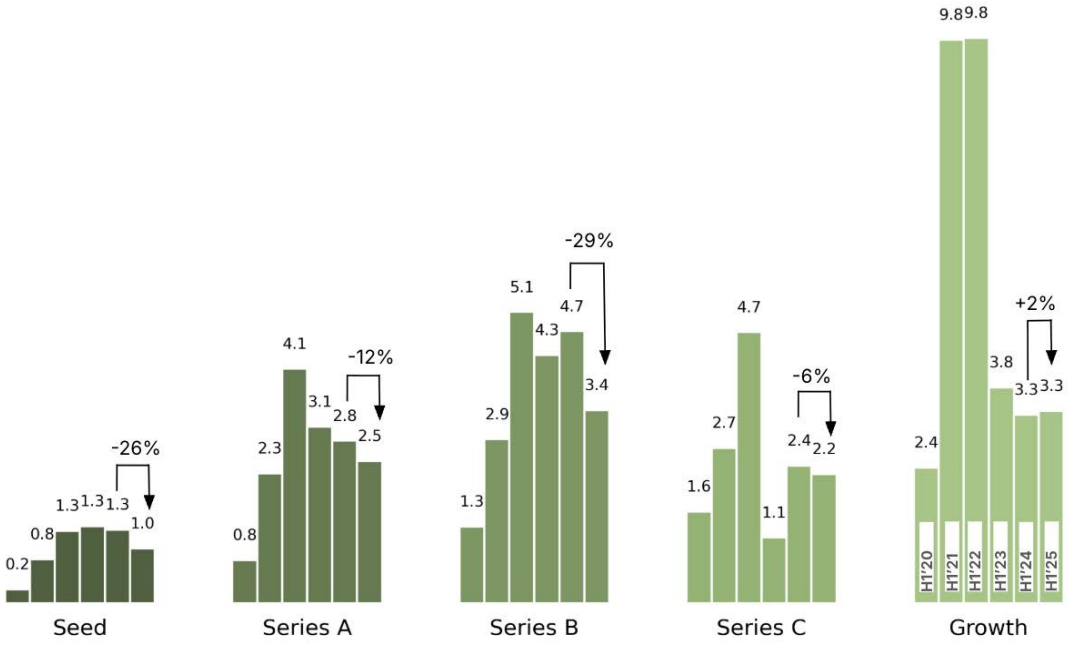
Trends in Investments

Recent climate-tech and climate-finance trends show a cooling but maturing investment landscape, with capital shifting toward resilience, energy security, and proven technologies.

According to the Sightline Climate H1 2025 Investment Trends Report[10], global venture and growth investment in climate tech fell 19% year-over-year, with deal volume declining and investors becoming more selective as shown below in Figure 11. Early-stage rounds (Seed–Series B) saw the steepest drops, while large "mega-deals" concentrated in security, resilience, and adaptation technologies dominated total deployed capital. Energy remained the top vertical, rising 13% year-over-year and accounting for 35% of funding.

10 Sightline Climate H1 2025 Investment Trends Report

FIGURE 11: HALF-YEARLY CLIMATE INVESTMENT BY STAGE, 2020-2025 YTD ($BN)



Source: Sightline Climate // Note: Data current as of 13 June 2025.

At the same time, the Global Landscape of Climate Finance 2024 [11] (Climate Policy Initiative) shows that global climate finance reached over USD 1.3 trillion annually in 2021–2022, but still represents just 1% of global GDP, far below the level needed to meet 2030 and 2050 climate goals. Adaptation financing remains critically underfunded, at one-third of required levels, and mitigation investment remains highly concentrated in energy, buildings, and transport while lagging in sectors like industry, agriculture, and water.

Both reports highlight persistent structural gaps: a widening “missing middle” for mid-stage financing, slowing deal growth, and rising bankruptcies among capital-intensive climate tech firms. However, they also note the continued increase in private capital participation, growing corporate and growth-equity activity, and new investment momentum around nuclear, fusion, carbon management, and climate adaptation. Overall, the data points to a climate finance landscape that is more cautious, more concentrated, but also more strategically aligned with long-term resilience and decarbonization priorities.

Where Does CTF Fit Now?

The CTF program fills an important gap in today’s tightening public-funding landscape by offering loan guarantees to early-stage climate companies that are ready to scale but struggle to access traditional financing. Because CTF operates through a revolving loan guarantee fund at IBank, guarantee dollars are recycled as loans are repaid, allowing the program to sustain itself and grow over time.

11 Global Landscape of Climate Finance 2024 (https://www.climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2024/)

IBank's mission to create and preserve jobs, expand access for underserved communities, and advance climate solutions aligns naturally with the objectives of CTF. Across its guarantee programs, IBank has demonstrated strong financial performance and high leverage. An initial state reserve of about 162 million dollars has supported more than 2 billion dollars in small business lending, producing a leverage ratio of roughly 12:1.

The optimal loan size for CTF borrowers tends to be around $6.25 million, which aligns with IBank's maximum loan guarantee level of 80% up to $5 million. This range captures many projects that previously sought funding under federal programs such as the IRA, which are now scaling back. As more government programs reduce or eliminate climate-related funding, CTF is increasingly attracting borrowers who need a reliable alternative source of capital. The Stearns Bank case study, included in Appendix B, demonstrates how this structure enables a private lender to confidently finance an early-stage climate company by relying on CTF's technical validation and IBank's risk-sharing guarantee.

While most lending partners prefer transactions above $1 million, we consistently receive inquiries from companies seeking $350,000 to $600,000. Many of these smaller early-stage applicants do not fully meet traditional underwriting requirements and may have gaps in financial documentation. In these cases, local credit unions and Community Development Financial Institutions can play an essential role by providing relationship-based lending and supporting borrowers whose business plans and community benefits justify more flexible financing.

In 2024, IBank launched the California Small Business Loan Match platform, a statewide tool designed to help small businesses quickly connect with responsible, mission-driven lenders. According to the 2023–2024 IBank Annual Report[12] , the website was created to "take the guesswork out of the lender search" by matching borrowers with pre-vetted lenders who already participate in IBank's loan guarantee programs and are more likely to qualify small businesses for affordable financing. The platform provides a free, easy-to-navigate one-stop portal where entrepreneurs can find reputable lenders across the state, particularly those serving socially and economically disadvantaged small business owners. All lenders in the directory use IBank's Small Business Loan Guarantee Program.

The FDCs are expected to continue operating as they have since the program began in 1978, adapting to the needs of their regional markets and taking on larger roles as climate technologies expand across California. As local demand grows for financing in areas such as electric vehicle (EV) charging, renewable energy generation including solar, biogas, and wind, and other emerging clean energy solutions, FDCs will remain key partners in helping these businesses access capital. Much of this activity is likely to be supported by increasing private investment that is helping fill the gap left by declining federal climate funding.

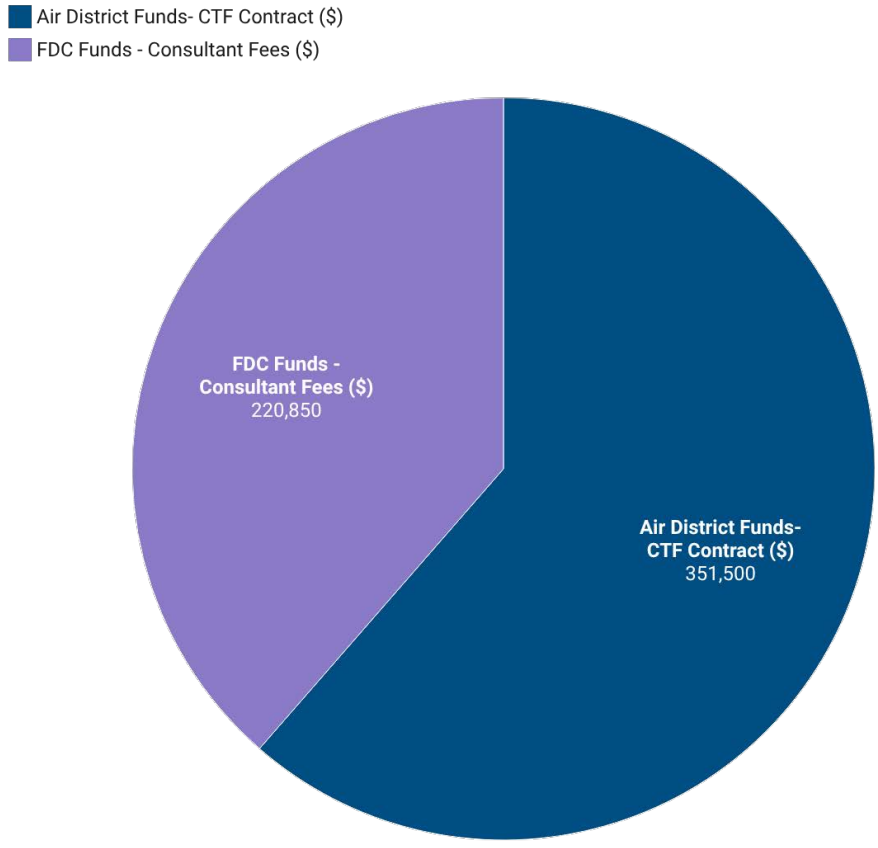
12 IBank Annual Report 2023-2024 (https://ibank.ca.gov/wp-content/uploads/2025/04/2023-2024-IBank-Annual-Report.pdf)

Sustainability of Climate Tech Finance

The CTF Program is funded through a combination of public resources and program-generated revenue, supporting both core operations and deal execution. Base program operations are supported by Air District funding, which covers internal staff time and external contractors. Staffing represents the primary fixed cost of the program. Outside of staffing, the largest ongoing expense is the Finance Leads contract, which provides specialized financial, underwriting, and deal-structuring expertise necessary to execute complex climate finance transactions.

An important feature of the program's sustainability model is its public-private partnership structure. In addition to Air District support, the Finance Leads' contract work is partially supported through partnership funds associated with FDC transactions. This cost-sharing arrangement helps reduce the portion of consultant costs borne directly by the program and reflects the value of collaboration across public and financing partners. As shown in Figure 12, 39% of Finance Lead compensation during FY 2021–FY 2025 came from FDC partnership funds, illustrating how external partnerships and leveraged support contribute to program delivery.

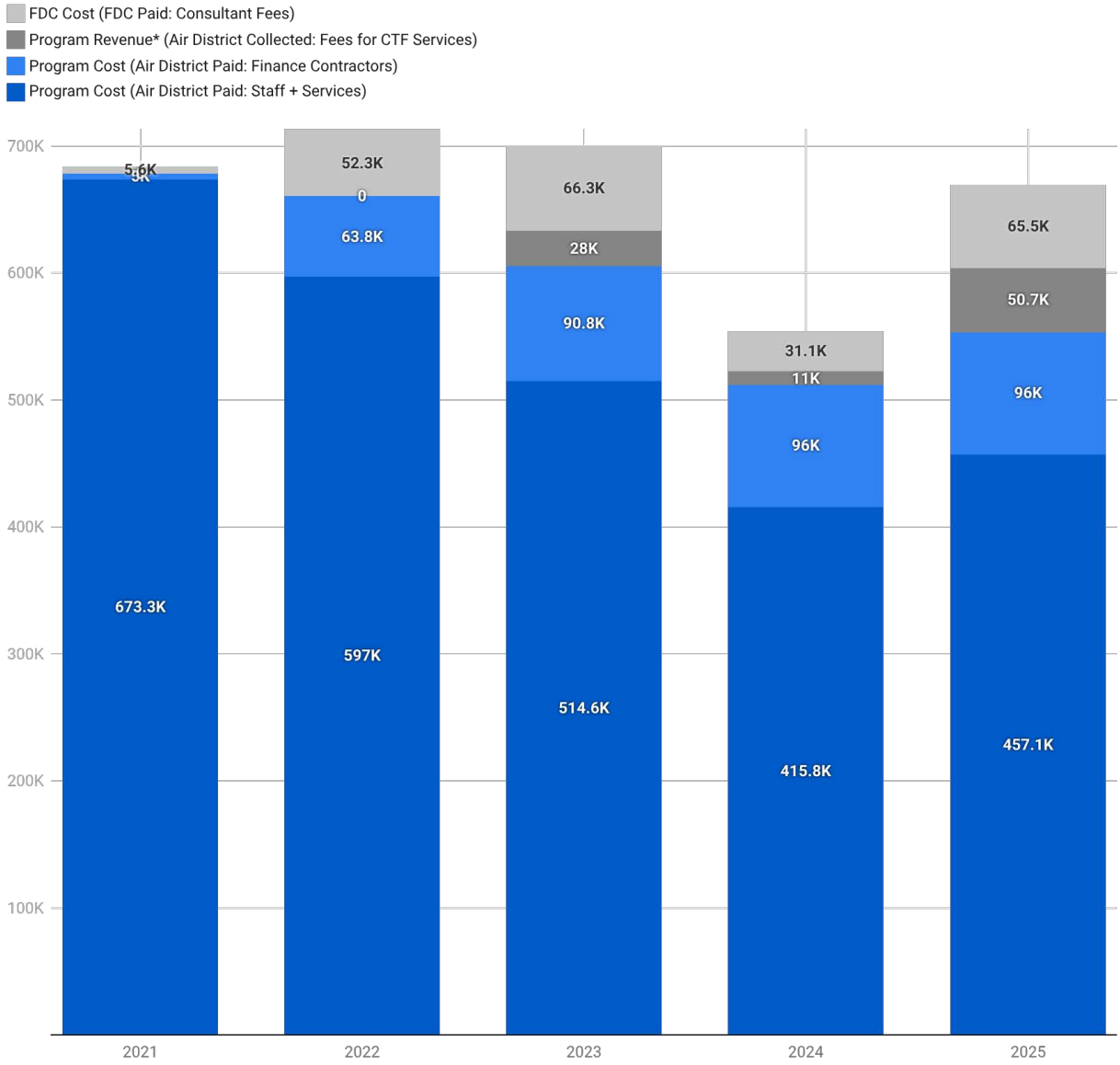
FIGURE 12: 39% OF FINANCE LEAD COMPENSATION IS FROM FDC PARTNERSHIP FUNDS (FY 2021-FY 2025 COMBINED TOTALS)



CTF also generates revenue through fees associated with successfully funded transactions. These fees help offset some of the program delivery costs and support long-term operational sustainability. As shown below in Figure 13, in 2023, 2024, and 2025, collectively program

revenues totaled $86,680. While this revenue does not fully cover program costs, it demonstrates an emerging cost recovery model in which successful deals help support future program activity. Taken together, Air District funding, program-generated revenue, and partner cost-sharing provide a more complete picture of the resources required to deliver the program and the ways CTF leverages outside support to maximize public impact.

FIGURE 13: CTF PROGRAM COSTS AND REVENUE (FY 2021-FY 2025)



**Program Revenue consists of fees for CTF services reimbursed to the Air District. These reimbursements are subtracted from Program Cost (Air District Paid: Staff + Services) to determine the final administrative expense.*

To support long-term sustainability, the CTF program is designed to gradually increase cost recovery through program-generated revenue while maintaining its public-sector mission. As deal volume grows, fees associated with successfully funded transactions will help offset a greater share of operational costs, particularly specialized financial and deal-structuring support. Continued process standardization and repeat transaction structures will further reduce

marginal costs per deal, allowing the program to scale activity without proportional increases in staffing. This approach strengthens CTF's financial resilience over time while preserving equitable access to capital and alignment with comparable public climate finance programs.

Over the five-year evaluation period, the CTF program supported over 3.5 million MT CO_2e reductions. Applying the U.S. Environmental Protection Agency's (EPA), and California Air Resources Board 2022 Scoping Plan social cost of carbon[13] of $85 per metric ton, these reductions correspond to approximately $299.8 million in avoided climate damages, reflecting reduced public health impacts, infrastructure losses, and broader economic disruption associated with climate change. Compared to total program costs of approximately $3.1 million over the same period, this analysis underscores the program's strong public return on investment, achieved through relatively modest expenditures. Every dollar invested in the CTF program resulted in ~$97 avoided climate damages, or a net societal benefit of $299.8 million.[14]

Other Government Loan Guarantee Programs

The first formal government loan guarantee program in the United States was established in 1934 during the Great Depression, and government-backed loan guarantees have since become a widely used and well-accepted tool to expand access to capital, support economic development, and mitigate lender risk. A review of major federal and state loan guarantee programs shows that most charge a one-time upfront fee, typically ranging from 1% to 4% of the guaranteed portion, and in some cases an annual servicing or maintenance fee. While programs vary in structure, target populations, and use cases, CTF's fee approach is consistent with prevailing government practices and aligns with market norms designed to cover administrative costs, manage risk, and ensure program sustainability. A detailed table comparing government loan guarantee programs is provided in Appendix D.

13 Referencing- 2022 Scoping Plan Appendix C-16: Social Cost of CO2, 2020 2.5% discount rate. 2022 CARB Scoping Plan Appendix C- AB -197, and White House Working Group (2021), https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-c-ab-197-measure-analysis.pdf; https://bidenwhitehouse.archives.gov/wpcontent/uploads/2021/02/TechnicalSupportDocument_SocialCostofCarbonMethaneNitrousOxide.pdf,

14 This estimate pulls from the upper range discount rate (2.5%) referenced by CARB in the 2022 scoping plan. This estimate can be considered conservative, and a likely underestimate as the SC-CO2 pulls from the earliest available year (2020), not accounting for the more costly years available for CTF greenhouse gas emissions which are modeled through 2029. Additionally, this calculation references the SC-CO2, translating projected CO2e into CO2, as opposed to values for methane which are more costly, reflecting its higher global warming intensity as a climate pollutant. The resulting number is likely an under-estimate for societal benefits of the program as it does not reference the social cost of carbon for methane, and does not reference future greenhouse gas reductions in the years of 2021-2029 by year. These numbers should be considered conservative estimates in order to illustrate the societal value of the program.



6 Stakeholder Feedback

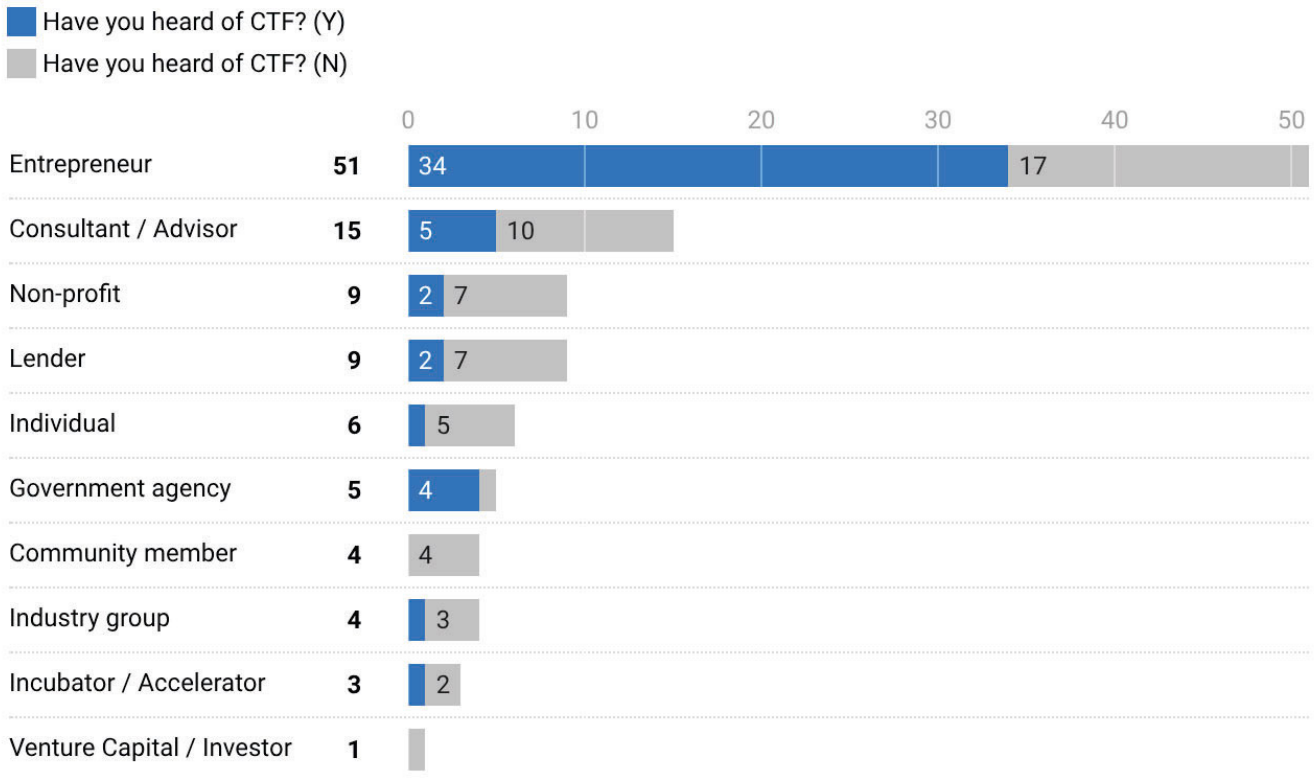
6-Stakeholder Feedback

An important element of this assessment was to collect stakeholder and external input, and data from existing sources to add to the review of program activities and statistics to provide a more complete view of the CTF program. This section includes feedback from stakeholders gathered through a CTF Program survey, Air District Board retreat, FDC roundtable, stakeholder interviews, and community priorities identified through the Air District's Community Investment Office survey and AB617 Community Emission Reduction Plans.

Entrepreneurs – CTF Survey

To better understand the needs of the climate tech ecosystem and evaluate program performance, CTF staff developed and administered a stakeholder survey between April and October 2025. A total of 107 respondents participated in the survey, including lenders, entrepreneurs, and ecosystem partners such as consultants, incubators, accelerators along with non-profits and some community members/individuals, as shown below in Figure 14. Their feedback provides valuable insights into how CTF is supporting emerging climate technologies and where additional improvements can strengthen the program's impact.

FIGURE 14: SURVEY RESULTS- CTF FAMILIARITY & STAKEHOLDER RESPONDENT TYPE (107 RESPONDENTS)



CTF Program Outreach

To understand how stakeholders most often learn of the CTF Program, and to better target CTF Program outreach in the future, stakeholders were surveyed on how they first learned about the CTF Program. There were 34 entrepreneurs and 14 other stakeholders and ecosystem partners

that responded. Entrepreneur responses are described below in Figure 15, while other stakeholder responses are described below in Figure 16. Most respondents first learned about the CTF program from government agencies or programs, such as IBank and the FDCs, followed by the CTF website, referrals from other entrepreneurs, startups, and founders, and at conferences such as Verge and Trellis.

FIGURE 15: SURVEY RESULTS- MOST ENTREPRENEURS HEAR ABOUT CTF FROM A GOVERNMENT AGENCY OR THE CTF WEBSITE (34 RESPONDENTS)

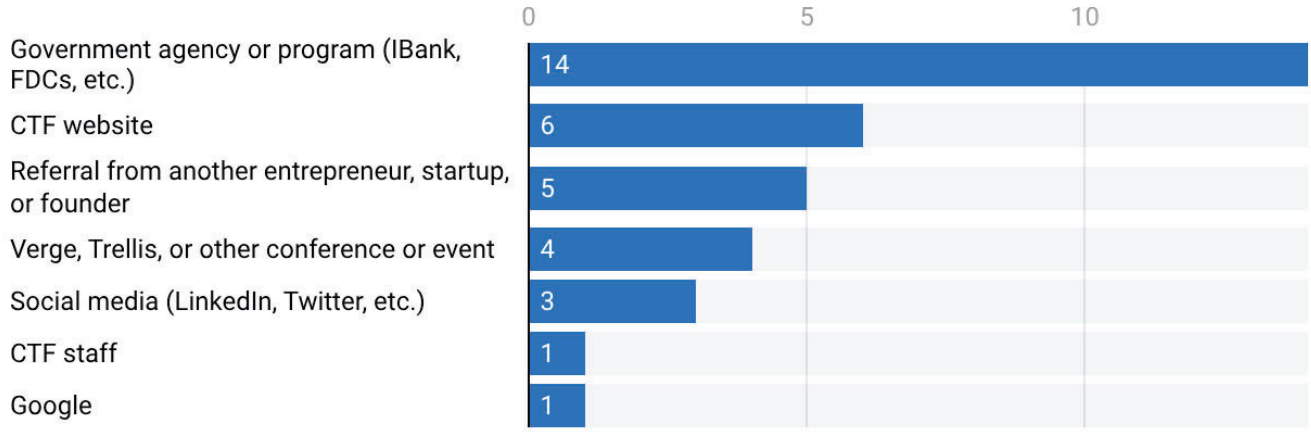
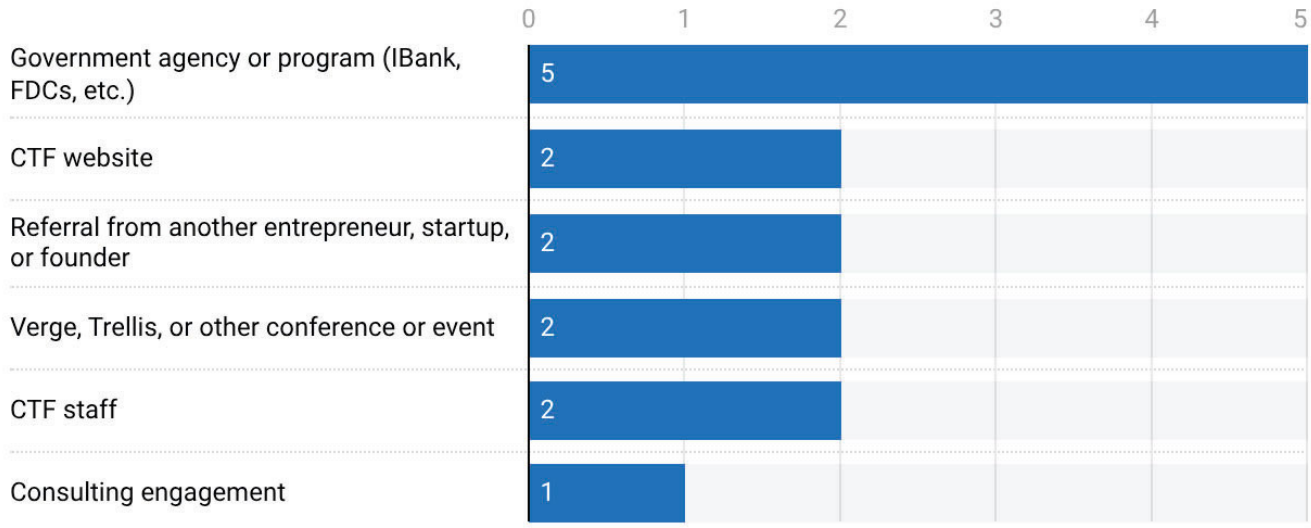


FIGURE 16: SURVEY RESULTS- OTHER STAKEHOLDERS MOSTLY HEAR ABOUT CTF FROM A GOVERNMENT AGENCY OR THE CTF WEBSITE (14 RESPONDENTS)

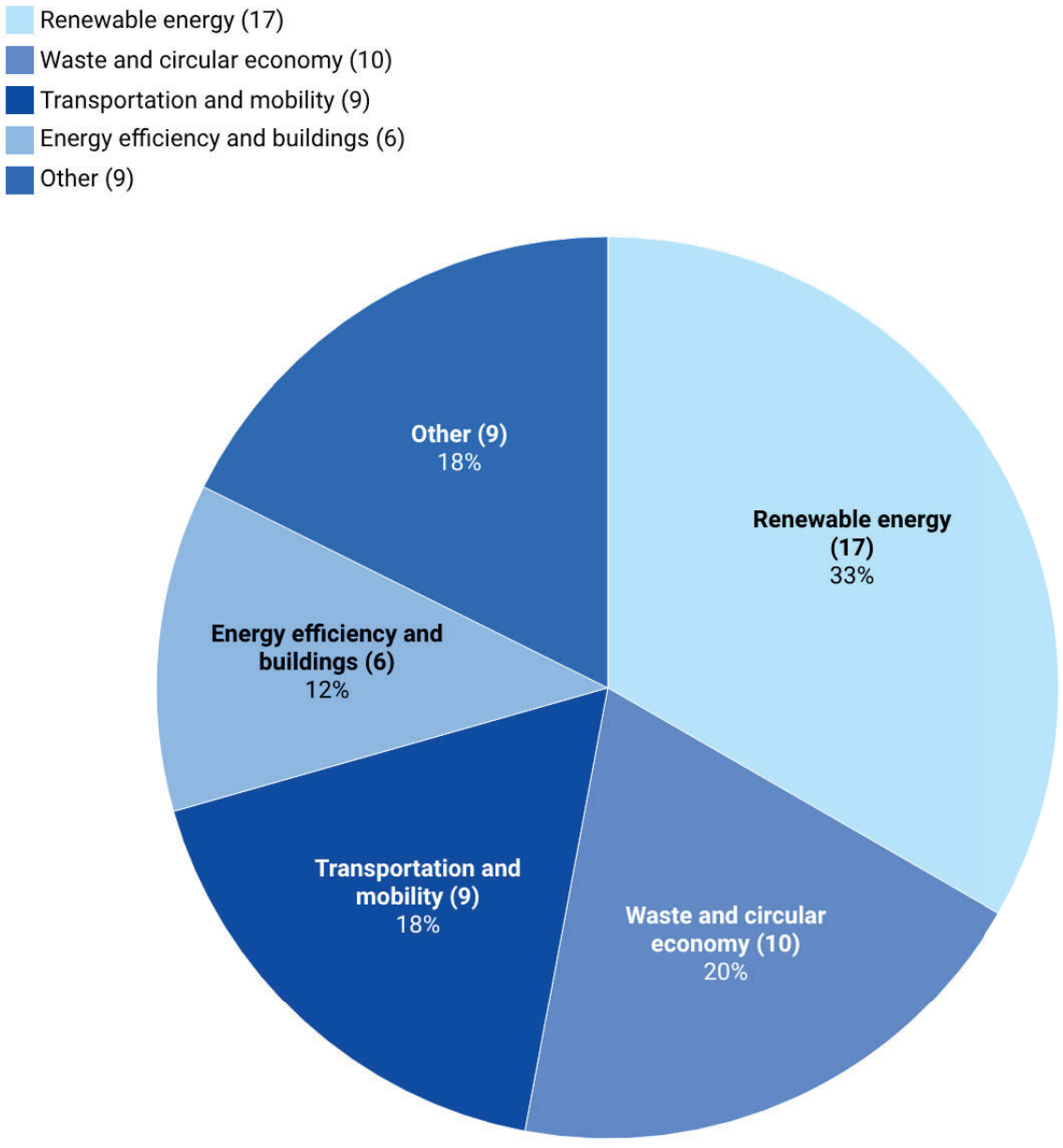


Sectors and Types of Climate Tech Solutions

The survey shows that respondent entrepreneurs are primarily working in the renewable energy sector, followed by waste and circular economy, transportation and mobility, and energy

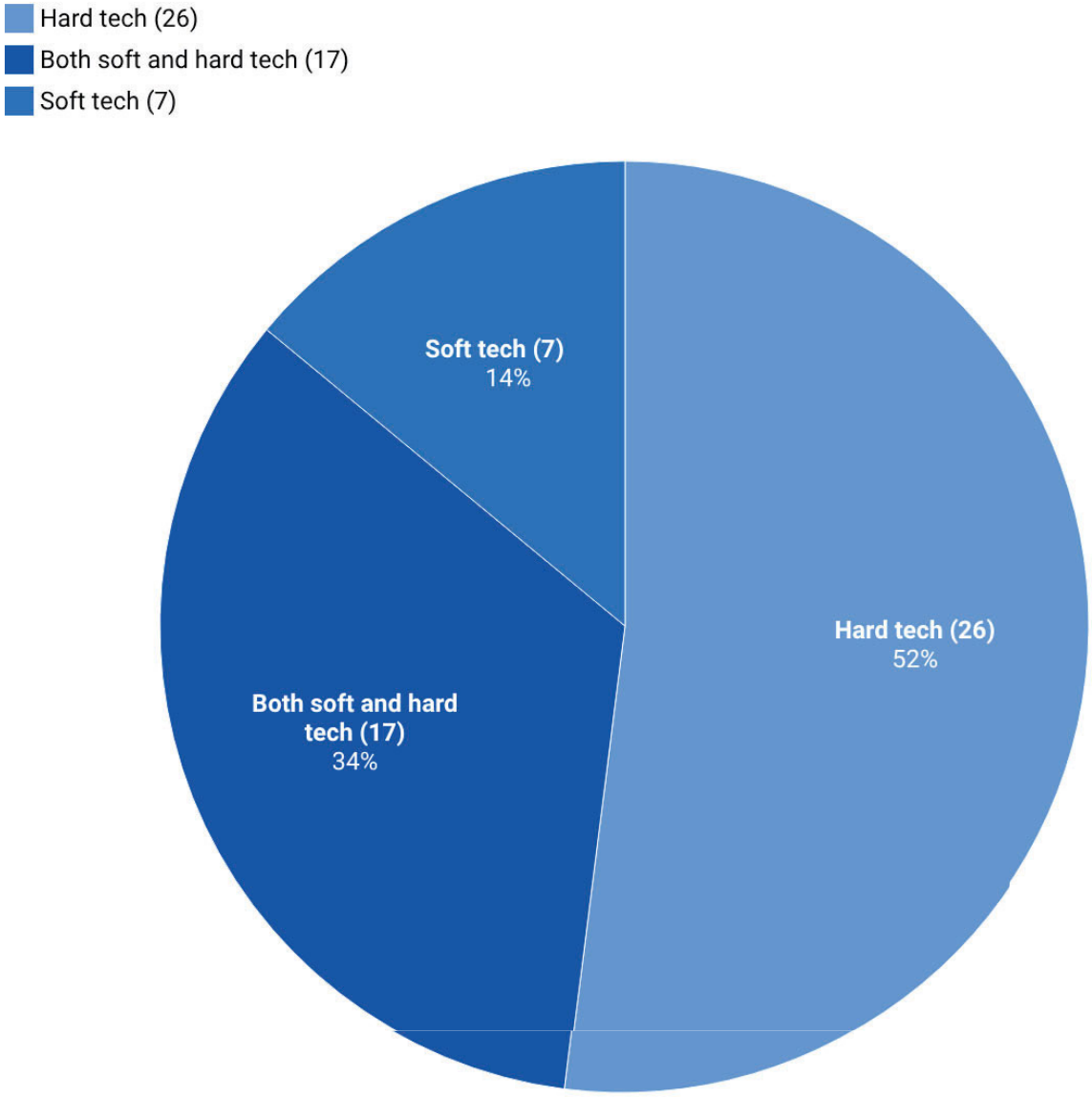
efficiency and buildings. These findings largely align with CTF staff's analysis of total loan amount requested by sector in FY 2024 and FY 2025 under the Our Demand section of this report. The rest of the sectors shown in the chart below only had one respondent each, with 51 responses total for this question. Nine responses grouped under 'Other' in Figure 17 included the following responses: carbon markets, on-site power generation, EV charging (multifamily), reusable foodware, sustainable mobile infrastructure for fieldwork, direct air capture, agriculture and food systems, forestry, low-carbon building materials.

FIGURE 17: SURVEY RESULTS- RENEWABLE ENERGY LEADS ENTREPRENEUR CLIMATE SECTOR AREAS (51 RESPONDENTS)



Entrepreneurs reported primarily working on hard tech, defined as physical products, equipment, materials, or hardware systems, followed by both hard and soft tech, as described below in Figure 18. Soft tech is predominantly defined as software, digital platforms, data tools, or services. Only seven out of 50 entrepreneurs responding to this question reported working on soft tech only. It's helpful to see that the CTF program is reaching the intended sectors, as well as where the CTF program has the potential to grow into sectors less represented by current CTF program entrepreneurs.

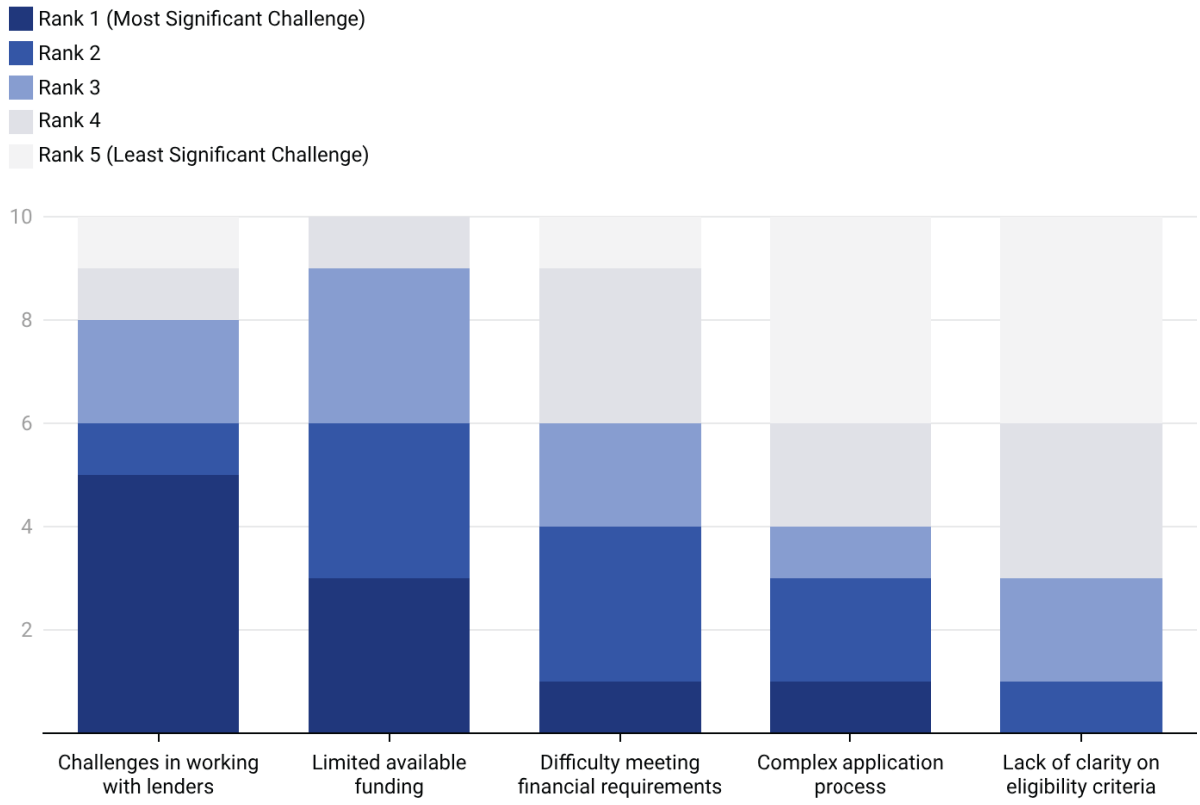
FIGURE 18: SURVEY RESULTS- 86% OF ENTREPRENEUR RESPONDENTS WORK ON HARD TECH (50 RESPONDENTS; HARD TECH & BOTH HARD AND SOFT TECH CATEGORIES)



Strong Demand for Early-Stage and Flexible Capital

Entrepreneurs and accelerator partner respondents emphasized that access to flexible, early-stage financing remains one of the most significant barriers to scaling climate technologies, as shown below in Figure 19. Many noted that traditional lenders remain hesitant to finance companies with emerging technologies, long development cycles, or limited collateral. Several founders stated that CTF's loan guarantee was the primary reason lenders were willing to engage, and in some cases, the only reason a loan was approved. While challenges in working with lenders and limited available funding were ranked as top challenges amongst entrepreneurs, a complex application process and lack of clarity on eligibility criteria were ranked as the least significant challenge in accessing CTF financing. These results show that the CTF Program is not only removing barriers to accessing funding with loan guarantees and assistance with lender matching, but that our application process and criteria is not a barrier to accessing our program. Out of the 51 total entrepreneurs surveyed, 10 responded to this question, as shown below.

FIGURE 19: SURVEY RESULTS- WORKING WITH LENDERS, LIMITED AVAILABLE FUNDING, AND DIFFICULTY MEETING FINANCIAL REQUIREMENTS NAMED AS TOP 3 CHALLENGES TO ACCESS CTF FINANCING (10 RESPONDENTS)[15]

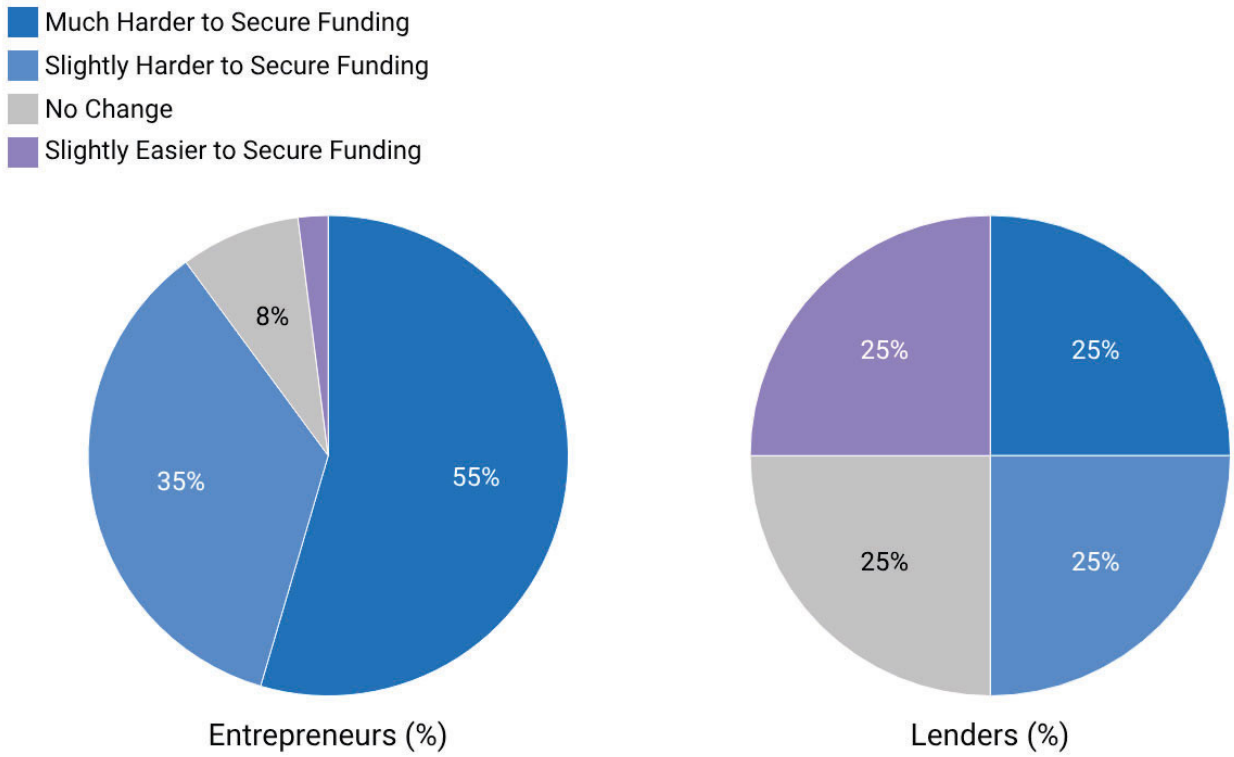


The responding lenders, in contrast, emphasized the challenge of assessing unfamiliar technologies and the lack of clear risk benchmarks for early-stage climate companies. They expressed strong support for the loan guarantee as a risk-sharing mechanism that allows them to responsibly enter climate markets they would otherwise avoid.

[15] Graph data represents count of Rank # responses (e.g. 5 ranked as 'Rank 5)

When asked how the overall financing landscape for climate tech companies has changed since 2020, most entrepreneurs reported that it is much harder to secure funding present-day, while lenders' responses were split and didn't indicate a clear change, but with half identifying funding as much, or slightly harder to secure, as shown below in Figure 20.

FIGURE 20: SURVEY RESULTS- FUNDING IS HARDER TO SECURE SINCE 2020 (48 ENTREPRENEUR RESPONDENTS, 7 LENDER RESPONDENTS)



Importance of CTF Technical Review

Both lenders and entrepreneurs identified the Phase 2 Technical Review as a key benefit of the program. Lenders reported that independent technical assessments improve confidence in early-stage technologies, reduce underwriting uncertainty, and streamline internal credit processes. Entrepreneurs valued the clarity provided by the technical review, particularly in communicating the GHG reduction potential and market relevance of their solutions to investors and partners.

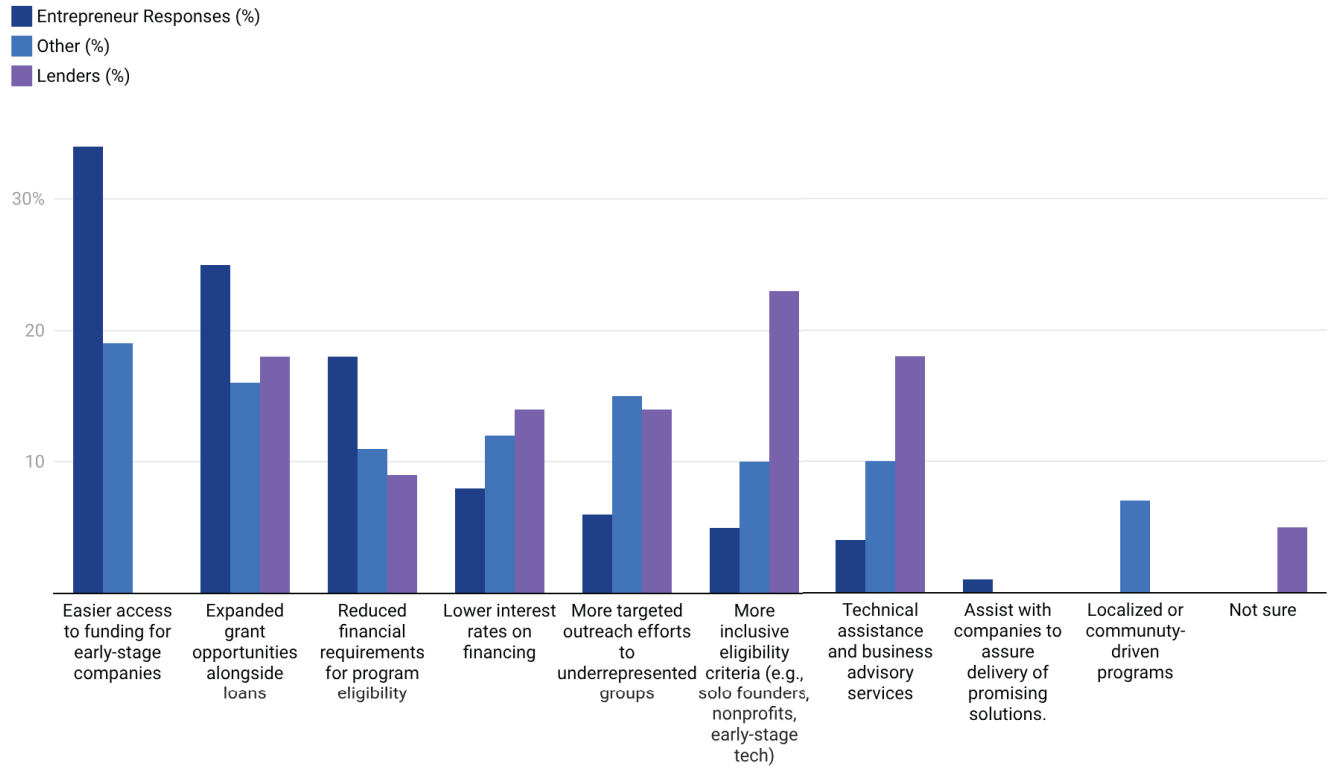
Need for More Clarity and Communication

Several respondents requested greater clarity around program requirements, timelines, and eligibility. Lenders expressed interest in additional training or reference materials to help their teams understand climate technology risk profiles and the structure of CTF guarantees. Entrepreneurs noted that earlier communication about documentation needs and financial expectations would help them prepare more effectively for lender engagement.

Ecosystem Support for Underrepresented Founders

Stakeholders (consultants, incubators, accelerators along with non-profits and some community members/individuals) and entrepreneurs highlighted the need for easier access to funding for early-stage companies, as shown below in Figure 21. Stakeholders, entrepreneurs, and lenders recommended expanded grant opportunities (alongside loans), reduced financial requirements for program eligibility, and more targeted outreach to underrepresented entrepreneurs. They also recommended increasing visibility of the program within community-based organizations, expanding technical assistance offerings, partnering with networks that serve diverse founders to improve equity and access in climate technology financing, more inclusive CTF Program criteria, (for example, solo founders, nonprofits, and early-stage tech), and lower interest rates on financing.

FIGURE 21: SURVEY RESULTS- EARLY-STAGE COMPANY FUNDING, EXPANDED GRANTS, AND REDUCED FINANCIAL REQUIREMENTS FOR ELIGIBILITY NAMED AS 3 GREATEST IMPROVEMENT AREAS BY ENTREPRENEURS (49 ENTREPRENEUR RESPONDENTS, 45 OTHER RESPONDENTS, 7 LENDER RESPONDENTS)



Community Engagement

Among entrepreneurs who responded to the question on community engagement, 67% (16 of 24) indicated that engaging with community organizations is already a core part of their operations. An additional five entrepreneurs have started engaging communities or plan to, and the remaining three said they would be interested in engaging communities with the right support. Because the survey did not define “community engagement,” these responses should be interpreted broadly and may reflect a range of activities, such as partnering with community-based organizations, conducting outreach or user research with impacted communities, supporting local workforce development, or collaborating on project implementation. Overall, the responses suggest strong interest in community-connected business practices, while also pointing to an area for additional research to better understand what types of engagement entrepreneurs are undertaking and what support would be most helpful.

Workforce Development

Half of the entrepreneurs surveyed (24 of 48) reported that their company currently supports workforce development, and 40% responded that they plan to provide this support in the future. Continuing to work with entrepreneurs who support workforce development will further equity in the CTF Program by creating jobs and furthering a just transition in communities where climate tech deployments take place.[16]

Broader Operational and Market Needs for Climate Tech Companies

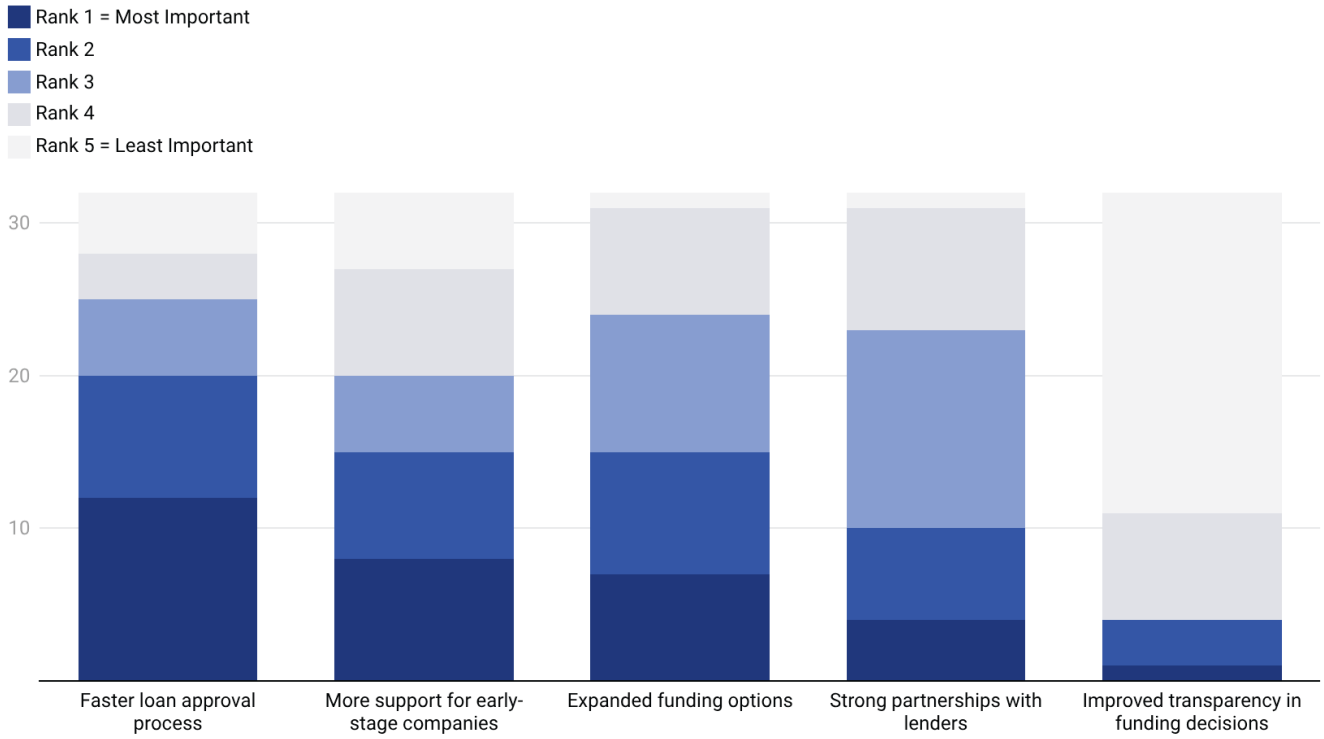
In addition to financing, entrepreneurs highlighted several operational challenges that affect their ability to scale. These include building reliable customer pipelines, navigating permitting or installation requirements, securing pilot sites, and obtaining early market validation. Some respondents reported that delays in procurement or regulatory processes can be as limiting as financial barriers. There is strong interest in opportunities where CTF or its partners could help companies better prepare for deployment, connect with end users, or identify potential demonstration opportunities.

CTF Program Improvements

Entrepreneurs reflected that a faster loan approval process was most important to them in considering potential CTF Program improvements, followed by more support for early-stage companies and expanded funding options, as shown in Figure 22. The majority of respondents ranked improved transparency in funding decisions as least important for CTF Program improvements, which may indicate that funding decisions are already seen as transparent.

16 A just transition is described by the United Nations Development Program and International Labour Organization as "Greening the economy in a way that is fair and inclusive as possible to everyone concerned, creating decent work opportunities and leaving no one behind". (https://climatepromise.undp.org/news-and-stories/what-just-transition-and-why-it-important)

FIGURE 22: SURVEY RESULTS- FASTER LOAN APPROVAL PROCESS & SUPPORT FOR EARLYSTAGE COMPANIES NAMED AS TOP 2 CTF PROGRAM IMPROVEMENTS BY ENTREPRENEURS (32 RESPONDENTS)



When asked about what one key improvement would make CTF more effective for their business, entrepreneurs responded that they'd like to see more flexibility and stronger partnerships with lenders, more lenders that are willing to loan to early-stage companies, being able to leverage grants, and more information about loans made and funding available.

Additional Support and Priority Financial Tools

Entrepreneurs highlighted that additional support from finance leads could be most helpful in developing stronger partnerships with lenders. Among the 26 entrepreneurs surveyed, over half indicated that the most helpful financial tools would be expanded partnerships with private equity and venture capital, as well as reduced collateral requirements for loan guarantees. The next most frequently selected options were convertible/ simple agreements for future equity (SAFE) notes for early-stage companies and revenue-based financing, each chosen by 26% of respondents.

Entrepreneurs Recommend Participation in the CTF Program

Amongst the 26 entrepreneurs surveyed, 50% rated their likelihood of recommending the CTF program as a 10 out of 10. An additional 23% rated their likelihood of recommending the CTF program as an 8 or 9 out of 10.

Air District Board of Directors

On January 29, 2025, the CTF team presented to the Air District's Board of Directors during a special/retreat meeting, providing an overview of the program, the economic benefits of loan guarantees, climate finance trends, sector challenges and opportunities, and selected case studies. The presentation was followed by a panel discussion on the role of capital and government action in advancing climate innovation. Board members engaged in discussion regarding CTF's financing structure, equity and accessibility, deployment of technologies across California, scalability challenges, federal funding stability, and the importance of co-benefits, emissions tracking, diversity, and investments in disadvantaged communities. Public comments emphasized the need for community aligned technologies, transparency, building trust, and reinvestment in overburdened areas. A full summary of the presentation, panel discussion, and comments from the Board of Directors and the public is provided in Appendix B.

Partners

FDC roundtable discussion during annual FDC meeting hosted by IBank on May 21, 2025

As part of CTF's 2025 strategic objectives, the May 21 roundtable convened representatives from CTF, FDCs, and IBank to establish a clearer collaboration framework. The discussion focused on refining role clarity, streamlining deal flow, and aligning expectations around due diligence, technical support, and lender engagement.

Participants discussed shifting the language used in initial project screening. Terms like "pre-qualification" were viewed as too committal, with preferences leaning toward more flexible alternatives such as "eligibility qualification" or a "letter of interest." There was consensus that FDCs should not be expected to identify lenders directly, and that CTF should clarify this boundary moving forward. Instead, CTF's role would center on maintaining a curated list of lenders who are familiar with projection-based and early-stage climate tech projects.

FDCs noted that they typically do not have the capacity to conduct full financial analyses on prospective deals. As a result, they prefer that CTF provide concise, standardized project summaries prior to referral. The group also explored options to improve lender engagement, including increasing guarantee levels from 80 percent to 90 percent or establishing a dedicated trust fund. The Chief Executive Officer of the Nor-Cal FDC highlighted the importance of building an ecosystem approach in which lenders are shared and engaged more collaboratively across the network.

There was broad interest in coordinating a joint presentation to lenders that outlines the CTF Program and its benefits. Several participants also supported the idea of CTF attending loan committee meetings to support process improvement and institutional knowledge sharing. A recommendation was made to adjust the current process by prioritizing FDC outreach before lender matching to improve coordination and efficiency.

Interview summaries

To understand how best to work with lenders, FDCs, and CTF partners, and evaluate program performance, CTF staff conducted interviews with three lenders, five FDCs, and three partners (the two finance leads and IBank) between August and October 2025. Feedback provided

during interviews resulted in key takeaways for how best to work with and support these stakeholders in partnering with the CTF program, and ways to improve program performance.

Partners

- **Additional CTF Staffing:** Finance Leads believe that the program could benefit from 1-2 more CTF staff, to provide additional support on the technical review. This would increase the total Air District staff to 4-5 staff for the CTF Program, which finance leads believe is needed to keep up with growth in the market, and to be able to more expeditiously review deals. Though adding staff to the CTF team isn't possible in the immediate future, it is helpful to have this feedback from Finance Leads.
- **Achieving CTF Financial Sustainability:** Finance Leads suggest charging 1/8th of a point (0.125%) as a review fee to generate more revenue to sustain the CTF Program financially. Currently, the program is funded by the Air District's General Fund. While the CTF Program doesn't plan to increase the fee anytime soon, it is a tool to keep in mind for the future when considering financial sustainability of the Program.
- **Partnering with Community Development Financial Institutions (CDFIs):** Both Finance Leads and IBank suggest that the CTF program can better support equity and access to funding for underrepresented entrepreneurs by partnering with CDFIs. Partnering with a CDFI could also introduce CTF Program staff to additional small businesses.

Lenders

- **Finance Leads as Helpful:** Lenders rely on Finance Leads to confirm that the client meets state loan guarantee criteria and their buy-in and understanding of proposed projects inspires confidence in lenders. Finance Leads are an important part of the CTF Program team.
- **Incentives for Lenders:** The $5M guarantee reduces lenders' risk substantially, but if the guarantee was 90% instead of 80%, lenders would be further incentivized to provide more loans, as there is higher scrutiny with a higher percentage guarantee. Lenders shared they also like when borrowers have skin in the game, either personal equity or a corporate guarantee, and that stacking guarantees is an option. The CTF Program team could potentially increase loan guarantees back to 90% via a pilot program with a partner who could provide the additional 10%, as discussed further in the Program Improvements section.
- **Financing Early-Stage Climate Tech and Innovation:** Lenders shared that if the tech is newer, they need proof of concept and 3-5 years of operations and financials. New tech with no established history is harder to review, and proposals are more attractive when the tech has been proven, such as with EV chargers. Given this lender preference, the CTF Program is always researching how to overcome this barrier for new tech, with loan guarantees, and partnerships with CDFIs for lower loan amounts.
- **CTF Impact Evaluation:** Lenders do not independently analyze the CTF Impact Evaluation as part of their core underwriting, which primarily focuses on assessing credit risk and the borrower's ability to repay the loan in full. However, once the CTF evaluation is completed, lenders understand that the project's technical viability and climate impact have been validated by the CTF team. As a result, while the CTF Impact Evaluation is not directly incorporated into the lender's credit analysis, it serves as an important required checkpoint in the overall transaction. As noted in the survey results in the previous section, technical review, including the CTF Impact Evaluation, is seen as valuable.

FDCs

- **Finance Leads:** It is helpful for FDCs to have the Finance Lead experts to assess potential clients, and evaluate the tech and landscape.
- **Certifying New Lenders:** FDCs can easily certify new lenders into the IBank's State Loan Guarantee Program.
- **Lenders and CTF:** A challenge is that banks are still getting comfortable with CTF, and we don't yet have specialty lenders to work with, or a lender network, for CTF.
- **Client-Lender-FDC Pipeline:** The FDCs interviewed prefer that clients first connect with a lender before going to the FDC. This is one less hand off and saves time for the FDCs, and allows the Finance Leads to shop the deal before connecting with the FDCs. Further, lenders ensure that clients are prepared before coming to the FDC, and ensure they have good financials for example. In general, FDCs are interested in understanding the pipeline more, and whether deals are coming from the lender or CTF Program.
- **Relying on Lender's Underwriting:** Most FDCs reported relying on the lenders' underwriting and don't underwrite the deal themselves, Though, they tend to verify everything the lender provides, asking questions and making sure to understand the underwriting. Since ultimately the lender will accept the deal, the FDCs just need to be comfortable with what the lender provided.
- **Communication:** While communication can sometimes be challenging across parties in the CTF Program pipeline, the CTF team is good at sharing information and being responsive.
- **CTF Impact Evaluation:** Like the lenders, FDCs do not independently analyze the CTF impact evaluation as part of their core underwriting. The FDCs are focused on capacity (if cash is available for payment), collateral (if there is sufficient coverage), and overall credit conditions (if the client's history shows they are able to repay the loan).
- **Statewide Reach:** FDCs work statewide, although ideally, they would stay within their region. Given statewide work, FDCs share banking partners, and various FDCs work with the same banks. Since each FDC has their own process for processing a deal, lenders tend to stick with the FDC they are familiar with, even if the company's headquarters or project location is closer to another FDC.
- **Higher Percentage Loan Guarantee:** If the guarantee was higher than 80% ,for example, 90% as it was previously, it would open more doors to work with more lenders on deals.
- **Comfort with Earlier-Stage Tech:** It is hard to work with clients pre-revenue, as there is no trend to establish proof, and FDCs want to see their cashflow within the year.

Community

Community Investment Office Survey

The Air District's CIO works to ensure that funds generated from enforcement actions are reinvested directly into the communities most impacted by air quality violations. Following the adoption of the Community Benefits Penalty Funds Policy in May 2024—which has generated over $124 million to date—the CIO conducted an anonymous community survey between March and June 2025 to better understand local priorities for climate and air quality investments. With more than 1000 responses, community feedback demonstrated strong demand for immediate, visible solutions that reduce pollution and improve indoor air quality. Residents prioritized projects such as school air filtration, home electrification, clean transportation, urban greening, and community air monitoring, and expressed a clear preference for shovel-ready efforts that

deliver tangible health and climate benefits now rather than planning or pilot projects. Equity was a central theme, with calls to prioritize renters, low-income households, and communities overburdened by industrial pollution. Respondents also expressed support for clean technologies that provide co-benefits such as workforce development, home retrofits, and enhanced public health resilience, themes that are similarly reflected in ABc617 CERPs and related community engagement efforts.

AB 617 Community Emissions Reduction Plans

In response to AB 617 (C. Garcia, 2017), the California Air Resources Board (CARB) launched the Community Air Protection Program to reduce air pollution exposure in the state's most impacted communities. Across California, residents, agencies, and organizations are collaborating to monitor local air quality and implement strategies that improve public health. In the Bay Area, the Air District is partnering with CARB, community members, local jurisdictions, environmental groups, and industry to develop Community Emissions Reduction Plans (CERPs). These plans serve as roadmaps for cleaner air, outlining targeted actions to reduce pollution and protect health in overburdened neighborhoods. CTF staff have identified strategies from the Air District's completed CERPs that align with the CTF Program. These strategies provide an opportunity to leverage additional implementation funding from the CTF Program to implement these community-identified priorities and solutions. Specific strategies and examples can be found in Appendix C.



7 Program Visibility

7- Program Visibility

The CTF Program builds awareness through a combination of targeted outreach and strategic marketing. Current visibility efforts include participation in industry events such as San Francisco Climate Week and Trellis Impact Climate Tech Conference, as well as educational content like our financial webinar series. Together, these efforts, along with digital outreach and partner referrals, help connect entrepreneurs with the CTF Program and increase awareness among lenders, public-sector partners, and other climate finance stakeholders.

San Francisco Climate Week 2025

As part of San Francisco Climate Week 2025, the CTF Program hosted Green Money, Green Impact — Unlocking Climate Capital from California's Green Bank, convening over 100 attendees representing startups, investors, researchers, nonprofits, and public agencies. The event highlighted IBank's role in bridging climate finance gaps through flexible public capital tools, including loan guarantees, bonds, venture investments, and the Climate Catalyst Fund. Speakers emphasized the importance of adaptive financing structures, strong public-private partnerships, and equitable capital deployment in the face of federal funding uncertainty. The discussion reinforced California's leadership in aligning financial innovation with climate resilience and inclusive economic growth, while underscoring CTF's role in de-risking climate technology projects through technical evaluation and loan guarantees. For a detailed summary of the event, including speaker remarks and audience discussion, please refer to Appendix B.

CTF Financial Webinars

To promote the growth and adoption of climate technologies, the CTF Program team organized a series of virtual and in-person webinars to bring together developers, entrepreneurs, and buyers of climate technologies to provide an opportunity for networking and learning from peers while facilitating growth and change in the climate tech finance space. Webinars were held between October 2022 and April 2024 and included the following topics: Leveraging Government-Backed Guarantees for Financial Success, Pitching to Climate Tech Lenders, and Sustainable Finance for a Sustainable Future. Recordings of the webinars can be found on the Air District's CTF Program page. summaries of the webinars in Appendix B.

Verge, Climate Tech Conference

Each year, the CTF Program participates in the Verge Climate Tech Conference in San Jose, maintaining a booth as part of the conference showcase. This presence provides an important opportunity to engage directly with climate technology companies, mission-driven lenders, local governments, and community stakeholders. By meeting potential applicants and partners in person, CTF increases program visibility, builds relationships, and expands awareness of available financing tools. Attendance at Verge also allows the team to stay current on emerging technologies and market trends, strengthening CTF's ability to support innovative solutions that advance regional climate goals.



8 Program Improvement

8-Program Improvement

The CTF Program team gained valuable insights for program improvements from soliciting feedback from partners, including lenders, FDCs, community members, and other stakeholders through surveys, interviews, and roundtables. Other program improvements have been gleaned from lessons learned throughout implementing the CTF program such as Social Equity Review results, demographics of entrepreneurs, and data analysis of deals, as well as informed by emerging trends and best practices in the climate tech ecosystem.

A summary table describing proposed improvement strategies organized by three overarching categories for improvement: Centering Social Equity (E), One Air District (O), and Improved Application Process (AP) is shown below in Table 4. Each improvement strategy also includes a proposed implementation timeline:

- **Near-term achievable (1 year)** describes initiatives that will start, and potentially finish within 1 year using existing CTF resources and staff time
- **Mid-term ambitious (1-3 years)** describes initiatives that could likely start and finish within 1-3 years, and are feasible with existing resources but may require additional staff research and or leadership approval, and/or are contingent on the achievement of near-term goals.
- **Long-term aspirational (2-5 years)** describes initiatives that are opportunities for program expansion and would require further exploration to assess feasibility/ cost-benefit tradeoff, and could likely be completed within 2-5 years.

Table 4 summarizes strategies described further throughout this Chapter (8), providing a high-level solution summary as well as implementation timeline. All suggested strategies should be considered suggestions, with feasibility of implementation contingent on future staff bandwidth, program resources, and market demand.

Table 4: Improvement Strategy Summary (Detailed)

Improvement Type	#	Strategy Name	Solution Summary- Strategy Approach	Implementation Timeline (Proposed)
Centering Social Equity (Equity)	E-1	**Increase Engagement with Underrepresented Entrepreneurs & Expand Outreach**	Expand targeted outreach to underrepresented entrepreneurs and green jobs initiatives, increase participation in webinars.	Near-Term Achievable
	E-2	**CTF Impact Portal Webpage**	Increase community-facing communication on CTF website to include a public-facing transparency portal with map improvements, project benefits, and a job tracker.	Near-Term Achievable
	E- 3	**Waive CTF Fee in AB 617 Communities**	Waive program fee to eligible projects located in Bay Area AB 617 Communities. By waiving CTF fees in AB 617 communities can further incentivize and reduce administrative burdens on these communities.	Mid-Term Ambitious
	E- 4	**Establish New Community Partnerships**	Pursue partnerships with community-based organizations and institutions to ensure climate tech solutions are aligned with local priorities in overburdened, low-and moderate-income communities.	Mid-Term Ambitious
	E-5	**Partnership with Community-Development Financial Institution (CDFI)**	Form a partnership with a mission-aligned Community-Development Financial Institution (CDFI) to support smaller-sized climate tech entrepreneurs, especially for loans under $500,000. Partnering with a CDFI will increase the pipeline of lenders ready and willing to provide loans of this size.	Long-Term Aspirational
	E- 6	**Increase Loan Guarantee Percentage to 90% for Underserved Communities (Pilot)**	Pilot an enhanced loan guarantee increasing coverage from 80% to 90% for projects located in overburdened and low-and moderate-income community, encouraging participation in communities that have faced barriers to accessing capital.	Long-Term Aspirational

Improvement Type	#	Strategy Name	Solution Summary- Strategy Approach	Implementation Timeline (Proposed)
	E- 7	**Pilot Climate Equity Finance Initiative**	Establish aligned Climate Equity Finance initiative to more directly support equity-centered climate investments, just transition outcomes, and support for AB 617 and CIO priority communities.	Long-Term Aspirational
One Air District	O- 1	**Strengthen Implementation Alignment with the Bay Area Regional Climate Action Plan (BARCAP)**	Regularly coordinate with the Planning and Climate Protection Division to support BARCAP implementation.	Near-Term Achievable
	O- 2	**Establish a Climate Tech Nexus**	Create a cross-divisional information-sharing function that tracks emerging climate technologies, connects market trends with internal expertise, and supports coordination across Air District divisions.	Mid-Term Ambitious
Improved Application Process	AP-1	**Update Climate Technology Definitions**	Update climate technology definitions to reflect market conditions and climate impact.	Near-Term Achievable
	AP-2	**Improve Entrepreneur Demographics Tracking**	Include optional race and gender information in online intake application to better evaluate equity, diversity, and demographic outcomes.	Near-Term Achievable
	AP-3	**Include Equity Questions in Phase 2 Tech Review**	Include environmental justice-relevant questions to the CTF program application (local hiring & CEQA).	Near-Term Achievable

Improvement Type	#	Strategy Name	Solution Summary- Strategy Approach	Implementation Timeline (Proposed)
	AP-4	**Increase Customer Service and Transparency- New Self-Screening & Deal-Tracker Tools**	Build yes/no qualification flowchart to clarify baseline criteria for CTF applicants, increasing transparency, and reducing staff time on misaligned applications. Create online deal tracker to allow applicants to view status of their application.	Mid-Term Ambitious
	AP-5	**Establish Refundable Intake Commitment Fee**	Introduce a $200-$300 refundable upfront fee for applications who proceed beyond the initial intake call to encourage applicant readiness and ensure that staff time is focused on projects actively pursuing financing.	Mid-Term Ambitious

Centering Social Equity (Equity) (E)

To meet Strategy 1.7 of the Air District's Strategic Plan to continue grow the CTF Program's climate benefits for communities, the Program will continue to embed equity at the core of its work, to create equitable access to climate-tech financing for underrepresented entrepreneurs and ensure program benefits are reaching overburdened and low- and moderate-income communities, in alignment with community priorities.

Centering Social Equity- Near-Term Achievable Improvement Strategies

E-1: Increase Engagement with Underrepresented Entrepreneurs & Expand Outreach

Expanded Outreach and Engagement

CTF staff will expand targeted outreach to underrepresented entrepreneurs and green jobs initiatives, informed by recommendations from incubators, accelerators, and community partners. The Air District Board has also expressed support for increasing diversity among funded company founders.

CTF staff will focus outreach efforts in those areas that have yielded the most program applicants to date: government agencies or programs (IBank and FDCs), the CTF website, referrals (from other entrepreneurs, startups, and founders), and at conferences (such as Trellis Impact). Program staff will also explore ways to increase engagement from other outreach avenues, such as social media, and employ more targeted and inclusive strategies to engage underrepresented entrepreneurs, including by tapping into community-centered entrepreneurship ecosystems (e.g., community colleges, trade schools, and workforce development programs) to broaden outreach approaches and expand entrepreneurship pipelines. The program will also explore partnerships with incubators, CARB, business-focused organizations, minority business organizations, and other entities that work directly with entrepreneurs and climate technology providers to broaden awareness of CTF and strengthen the applicant pipeline. Success in engaging technology providers earlier in the process may also help advance several of the program goals identified in this assessment, including improving applicant readiness and increasing participation from underrepresented entrepreneurs. The CTF program will also seek to enhance community-facing outreach by coordinating with other Air District divisions that are working within communities, such as those that provide grant funding for clean equipment and transportation, and by identifying internal opportunities to align with projects supported by other divisions (e.g., Strategic Incentives Division [SID]) that may also meet CTF eligibility criteria.

Webinars and Events

Staff will consider hosting additional webinars with community and economic development groups to share information about climate tech, clean energy jobs and entrepreneurial opportunities within CTF. These webinars and events would serve as one part of a broader outreach and partnership-building effort to engage more potential applicants and strengthen front-end awareness of the program. Finally, the CTF Program will continue aligning supported climate tech solutions with community needs identified via the Air District CIO community survey and AB 617 strategy implementation.

In addition to virtual engagement, the Program will explore in-person outreach opportunities in partnership with local governments and community-based organizations, particularly at the intersection of climate, entrepreneurship, and economic development.

E-2: CTF Impact Portal

CTF Program staff will create a public-facing transparency portal to improve access to program data and increase visibility into where and how CTF-supported projects are delivering benefits. That webpage on the CTF website will feature an interactive map that overlays project locations with overburdened and low- and moderate-income communities, along with clear description of projects benefits. As an improvement from the CTF Program's current maps that are based on zip codes, the map will include the specific census tracks where CTF projects are headquartered and deployed. The CTF Program has already started to collect census tract data for climate tech project deployment locations, rather than zip codes, which will enable Program staff to better track and analyze which project deployments are within, and benefit, overburdened and low-and moderate-income communities. This map will enable community members and CTF Program partners to see where projects may be creating benefits for community, as well as provide transparency as to which projects and technologies have been supported to date, as well as accountability for CTF Program staff in maximizing community benefits through climate investments.

In addition to the CTF project headquarter and deployment map, the CTF Project Impact Portal will include job tracker to provide visibility into employment outcomes generated by CTF-supported projects.

To improve overall program accessibility, staff might consider introducing multilingual and plain-language website content and outreach materials.

Centering Social Equity- Mid-Term Ambitious Improvement Strategies

E-3: Waive CTF Fee in AB617 Communities

To advance equity and support climate investment in the Bay Area's most overburdened communities, the CTF Program may consider waiving its standard program fee of 50 basis points for eligible projects located in the Bay Area AB 617 communities. These communities face disproportionate air pollution and public health impacts, and often experience higher barriers to accessing affordable capital.

Waiving the CTF fee for projects in AB 617-designated communities would directly reduce transaction costs for borrowers. The fee waiver could be structured with clear eligibility criteria tied to project location and community designation, ensuring that the benefit is narrowly targeted and aligned with the Program's air quality and environmental justice goals. By lowering upfront and ongoing costs for high-impact projects in priority communities, this approach would reinforce CTF's commitment to equitable climate outcomes while maintaining overall program sustainability**.** Success of this strategy would be contingent on increased outreach to AB 617 communities and resource availability.

E-4: Establish New Community Partnerships

CTF will pursue place-based partnerships with community-based organizations and institutions to ensure climate tech solutions are aligned with local priorities in overburdened, low- and moderate-income communities. A near-term opportunity could potentially include collaboration with a community-based organization, business group, and/or incubators that focus on diverse founders working in and with overburdened communities.

This partnership concept is intended as a potential pathway to strengthen community engagement, improve access to capital, and advance projects that deliver tangible environmental and economic benefits.

Participation in a partnership of this nature could offer CTF a trusted channel to better understand local needs and identify potential project opportunities that are community-supported and implementation-ready. By working alongside a locally embedded organization, CTF may be able to expand outreach to eligible borrowers, improve the flow of qualified referrals, and strengthen trust in communities where access-to-capital barriers are persistent.

Centering Social Equity- Long-Term Aspirational Improvement Strategies

E-5: Partnership with Community-Development Financial Institution (CDFI)

To broaden the impact and reach of the CTF program, staff proposes exploring the possibility of forming a partnership with a mission-aligned CDFI to support smaller-sized climate tech entrepreneurs. This model would unlock financing pathways for companies that may not meet traditional bank thresholds, while maintaining CTF's focus on climate-aligned outcomes.

The Air District could select one CDFI as a dedicated lending partner to serve as the primary point of contract for smaller transactions, particularly loans under $500,000. Currently about a quarter of all CTF applicants are looking for under $500,000. This partner would receive a consistent flow of pre-qualified applicants who meet CTF's climate eligibility criteria but fall below commercial bank lending thresholds.

The CDFI would take the lead on financial underwriting and due diligence, while the CTF team would continue managing technical reviews and climate impact assessments. This shared model would reduce the workload on CTF's finance consultants, accelerate deal timelines, and leverage the CDFI's experience with under-collateralized or mission-aligned borrowers. Risk-sharing may also be supported through CTF's loan guarantee structure.

This partnership could also enable the use of more flexible financing structures that entrepreneurs identified as particularly beneficial, including revenue-based financing and, where appropriate, convertible or SAFE-style instruments deployed by the CDFI or affiliated capital providers. These tools can help early-stage firms bridge the gap between technology validation and bankable scale, while positioning them for future traditional debt financing.

At this stage, any CDFI partnership would require further exploration to understand partner interest, operational feasibility, expected resource needs, and potential program costs or revenue implications. This could include discussions with mission-aligned CDFIs regarding the level of staffing, underwriting, loan servicing, technical assistance, credit enhancement, or other support that may be needed to make smaller climate tech loans viable. Depending on the structure, implementation could require additional public funding, such as partner support or loan loss reserves. These considerations would need to be evaluated before advancing a pilot or formal partnership.

E-6: Increase Loan Guarantee Percentage to 90% for Underserved Communities (Pilot)

To increase participation by entrepreneurs in historically underserved areas, the Air District could pilot an enhanced loan guarantee that increases coverage from 80% to 90% for a defined subset of projects located in overburdened and low- and moderate-income communities.

The additional 10% coverage would be capitalized through external partners (e.g., philanthropic or community-based organizations), or internal Air District funding sources. This approach would be structured to reduce lender risk, improve borrower loan terms, and encourage greater lender participation in communities that have historically faced barriers to accessing capital.

Because the pilot would cover only the incremental 10% above the existing 80% guarantee, it could be a relatively efficient way to expand access to smaller loans. For loans under $1 million, the additional 10% coverage would equal up to $100,000 per loan. This means that $1 million in additional reserve funding could support up to 10 loans of $1 million each, and more loans if the average loan size is smaller.

For example, a community-based organization could consider raising a separate $2 million credit enhancement fund to support the additional 10% guarantee layer for qualifying loans made by banks and CDFIs to small businesses operating within the organization's area. The $2 million reserve could support up to $20 million in small business lending and help catalyze the creation of more than 1,000 jobs in an underserved community. A portion of these loans could also support businesses that could be eligible CTF clients, aligning with CTF's strategic goals. As described, this incremental coverage could function as targeted credit enhancement intended to reduce lender loss exposure and, as a result, improve the availability of credit and loan terms for borrowers in a community that has historically faced barriers to accessing capital. This concept is presented as an exploratory partnership opportunity rather than a commitment to specific activities or outcomes.

A pilot to increase the loan guarantee from 80% to 90% is operationally feasible because similar guarantee mechanics were implemented under the regional CTF program between 2018–2022. Funding for the pilot could be supported through available program reserves or recycled capital from recovered loan guarantees. Under this structure, IBank would administer the incremental 10% as a separate reserve and the remaining 80% would need to be funded through non-SSBCI sources. Eligibility criteria and underwriting standards would remain consistent with the base program to avoid increasing credit risk while expanding access.

E-7: Pilot Climate Equity Finance Initiative

To complement the CTF Program and more directly support equity-centered climate investments, the Air District may explore establishing a separate but coordinated initiative Climate Equity Finance (CEF). This program would focus on advancing just transition outcomes and supporting AB 617 and CIO priority communities, where traditional greenhouse gas (GHG) reduction metrics are difficult or not feasible to quantify.

While CTF is designed to prioritize projects with measurable and attributable GHG reductions, many community-scale, workforce-focused, and resilience-oriented investments deliver critical climate and air quality benefits that are not easily captured through conventional emissions accounting. A CEF-supported project could help finance a community resilience hub with air filtration, cooling, backup power, and space for community services during smoke or extreme heat events; support workforce training and job placement for local residents preparing for jobs in building decarbonization, clean energy installation, or climate resilience; and fund neighborhood-scale adaptation efforts such as cooling improvements, shade infrastructure, or local air quality protections. A CEF program would create a dedicated pathway to support these projects without compromising CTF's core performance framework.

Under this model, CEF would prioritize investments that advance environmental justice, community health, workforce development, and local economic resilience in overburdened communities. Eligible activities could include just transition projects, community-based climate

adaptation, clean energy access initiatives, and capacity-building efforts aligned with AB 617 and CIO goals. Success metrics would emphasize community benefits, such as improved local air quality indicators, job quality and retention, household energy burden reduction, and community ownership, rather than quantified GHG reductions.

Structurally, CEF could leverage lessons, partnerships, and financial tools developed under CTF, while operating under a distinct evaluation framework, funding criteria, and reporting structure. This separation would preserve the integrity of CTF's emissions-focused mandate while allowing the Air District to respond more holistically to climate equity needs identified by communities and local governments.

One Air District (O)

One Air District- Near-Term Achievable Improvement Strategies

O-1: Implementation Alignment with the Bay Area Regional Climate Action Plan (BARCAP)

To support stronger alignment, the CTF and Planning teams should establish a consistent communication pathway that allows for regular coordination around implementation priorities and financing opportunities. This would include identifying priority categories of partners advancing BARCAP-aligned measures, such as local governments with shovel-ready projects, public–private partnerships, and community-based intermediaries to ensure CTF understands where active deployment is occurring and where financing constraints may emerge.

Coordination should also focus on identifying specific BARCAP measures that face financing gaps, particularly in cases where private partners or technology providers are aligned with policy goals but struggle to secure capital. This helps ensure that CTF's loan guarantees are directed toward projects that meaningfully advance BARCAP implementation. In addition, coordination would allow both teams to share information about deployment-ready projects and available financing pathways, including CTF, IBank direct lending programs, and other state or regional incentives. Planning's technical and policy expertise would help confirm that prospective CTF-supported projects align with BARCAP goals and broader Air District climate priorities. Additionally, findings from BARCAP outreach to frontline communities, community-based organizations (CBOs), and local governments may be used as a guide to understand the current nexus of environmental justice community wants and needs for climate solution deployment across the Bay Area. This could also build on lessons learned from other Air District programs and efforts, including this assessment, to continue deepening the Air District's understanding of community interests and how the program may adapt to better support them over time.

As a longer-term consideration, exploration of additional funding and financing mechanisms may be necessary to support sustained implementation of BARCAP measures. Local governments have expressed interest in identifying more durable and scalable financing solutions beyond one-time grant funding, particularly for projects that require ongoing capital to achieve long-term emissions reductions. While no specific tools are being proposed at this stage, the Air District may evaluate future opportunities to strengthen its funding and financing toolkit, including potential adjustments to existing programs such as CTF, in ways that further advance BARCAP goals as resources and priorities evolve.

O-2: Establish a Climate Tech Nexus

To create a proactive and cross-divisional approach to innovation that is rooted in the Air District's core values, the CTF team will work to create a Climate Tech Nexus (Nexus). The

Nexus would serve as a central source of information on emerging climate technologies and market trends, helping connect external developments with internal expertise and strengthen collaboration across divisions. This ensures that when we encounter climate technologies, such as clean energy solutions for data center decarbonization, that knowledge is shared across divisions to support collective objectives.

This improvement also upholds our commitment to integrity and transparency by sharing on-the-ground data and company insights, we serve as responsible stewards of public resources, ensuring that potential environmental justice outcomes are identified early. Whether we are connecting a promising early-stage company to an incentive program or grounding our technical evaluations in the best available science to build public trust, the Nexus ensures that the most impactful climate technologies are assessed and integrated into the Air District's work, as appropriate.

Improved Application Process (AP)

Improved Application Process- Near-Term Achievable Improvement Strategies

AP-1: Update Climate Technology Definitions

Since the inception of the CTF Program, the definition of climate technologies was intentionally broad to ensure that the team could stay ahead of innovation, learn firsthand about emerging solutions, and help move them toward mass adoption. As the program matured and found its niche, this broad approach evolved into a focused strategy centered on the sectors that have successfully received CTF loan guarantees in the past. This refined focus reduces time spent on low-probability projects and builds deeper staff expertise in high-impact areas. Moving forward, CTF seeks to prioritize projects that benefit overburdened communities and support Air District Strategic Plan priorities where possible while also reducing GHG emissions.

For the purposes of the program, climate technology is defined as a product or service that directly or indirectly reduces or eliminates greenhouse gas emissions, sequesters carbon to prevent it from entering the atmosphere, or removes greenhouse gases from the atmosphere. Guided by the 2017 Bay Area Clean Air Plan, Air District Strategic Plan (2024-2029), Bay Area Regional Climate Action Plan (BARCAP) and the California Air Resources Board (CARB) 2022 Scoping Plan, The CTF program categorizes projects under five actionable focus areas.

CTF initially categorized projects into the following sectors: Energy, Mobility, Other, Circular, Agriculture, and Water. Based on the types of technologies applying to the program, CTF updated this framework to: Energy, Mobility, Building, Agriculture, and Circularity, Waste and Materials. The updated framework moved Buildings out of Energy to reflect the growing number of efficiency and low-carbon construction projects, refined the Circular category with a clearer Waste and Materials focus to better capture material recovery and low-carbon materials, and eliminated Other and Water sectors due to limited applicability in recent applications.

Below are the definitions of the updated climate technology sectors as well as a sector-wide disclaimer on not pursuing deals based on equity or environmental justice risks:

- **Energy** is defined as zero-emissions technologies that produce electricity without emitting GHGs or harmful air pollution. Renewable natural gas and biodiesel are not considered clean energy sources due to air pollution impacts of combustion. Hydrogen, depending on how it is generated and used, may or may not be considered a clean energy source.

- **Mobility** includes zero-emission vehicles (ZEVs) of all sizes (passenger vehicles, medium, heavy duty), innovations to increase active transit, non-road equipment and the charging and fueling infrastructure that support them.
- **Buildings** include technologies that reduce GHG emissions and improve efficiency in residential, commercial, and institutional buildings through electrification, energy efficiency, low-carbon materials, and smart management of heating, cooling, and power systems.
- **Agriculture** includes farming and land-use systems that reduce GHG emissions, enhance carbon sequestration, or improve climate resilience.
- **Circularity, Waste and Materials** reduces the lifecycle emissions through innovative, energy-efficient material recovery, recycling, reuse, and circular manufacturing. This sector includes industrial material recovery, composting, and low-carbon material innovation that displaces virgin production, reduces landfill emissions, and improves climate outcomes beyond baseline conventional diversion or recycling approaches.

In addition to mitigation-oriented technologies, CTF recognizes the growing importance of climate adaptation and resilience solutions that help communities withstand climate impacts such as wildfires, extreme heat, and flooding. CTF excludes projects that rely heavily on fossil fuels or transitional technologies where zero-emission alternatives are feasible, ensuring that public funding supports sustainable innovation with measurable climate and air quality benefits. By refining its technology scope while maintaining flexibility to adapt to emerging solutions, the CTF Program continues to strengthen its ability to accelerate market-ready technologies, deepen community impact, and contribute meaningfully to California's decarbonization and environmental justice goals.

Across all sectors, CTF reserves the right not to pursue deals with companies whose operations result in clear harm to communities (e.g., significant increases to localized pollution).

AP-2: Improve Entrepreneur Demographics Tracking

The CTF Program has an online application process that helps streamline intake, reduce administrative burden, and improve data consistency. As part of this intake form, the Air District will voluntarily request race and gender information from applicants to improve program tracking, equity analysis, and aggregate reporting. This information helps the Program better understand who is being reached, identify potential gaps in access or participation, and evaluate whether outreach strategies and program design are aligned with the Air District's equity objectives. Collection of this information is solely for analytical and reporting purposes. Responses will be optional and will not affect eligibility or funding decisions.

AP-3: Include Equity Questions in Phase 2 Tech Review

To ensure CTF solutions benefit, and not burden, overburdened communities, the Program will look into adding two questions to the CTF Program application: hiring locally for CTF solution implementation, and if the project will file for the California Environmental Quality Act (CEQA). If CTF solutions can hire locally for project implementation, the Program can create more economic benefit within overburdened communities, thus increasing the equity value add of the Program, as well as contributing to a Just Transition by engaging community members in greener technology jobs.

Adding a CEQA question to the application would achieve two goals: cross-divisional coordination on CEQA, and CTF project support to reduce GHG emissions and air quality

impacts in project implementation. First, as an Air District, staff in Planning Division can better track and coordinate CEQA comment letters, in the event the CTF proposal is located within the Air District's Bay Area jurisdiction and needs to file CEQA for project that completed CTF Phase 2 Tech Review. Second, by adding a question regarding CEQA on the application, the CTF program can also point applicants to the Air District's CEQA Guidelines, and specifically Chapter 2 "Best Practices for Centering Environmental Justice, Health, and Equity," for best practices on implementing projects in a way that doesn't further burden overburdened communities. Operationally, the Planning Division already has a list of high-profile projects from the Engineering Division to reference, and the list of CTF projects can be added to this list for reference.

The Program recognizes that these additions may not fully capture the range of environmental justice considerations relevant to CTF-supported projects. Staff will continue to refine and expand application questions over time to better reflect evolving best practices in environmental justice, equity, and community impact, and may incorporate additional criteria as opportunities are identified.

Improved Application Process- Mid-Term Ambitious Strategies

AP-4: Increase Customer Service and Transparency- New Self-Screening & Deal-Tracker Tools

Website Flowchart for Initial Applicant Self-Screening

To streamline intake and improve applicant experience, the CTF program will introduce a website-based yes/no qualification flowchart as an initial self-screening step prior to the full application. This tool will guide prospective applicants through a short series of eligibility and readiness questions aligned with CTF requirements, such as geographic eligibility, climate impact alignment, and financing readiness, so applicants can quickly determine whether the program is a good fit.

Applicants who meet baseline criteria will be directed to provide additional information through the online intake application. Applicants who do not meet these criteria may be earlier in project development or not yet positioned to secure traditional debt financing, which is a requirement of the program. These applicants will still be encouraged to connect with the CTF team for guidance, as the flowchart is intended to set clear expectations and communicate program constraints rather than serve as a formal eligibility determination.

This approach reduces incomplete or misaligned applications, saves staff time, improves transparency, and supports higher-quality, better-prepared submissions.

Program Communication

CTF Program staff will continue working to improve communication across all parties in the program pipeline by providing greater clarity around program requirements, timelines, eligibility criteria, and financial expectations. Earlier and more consistent communication will help entrepreneurs prepare stronger applications and enable lenders to engage more efficiently.

To support this goal, the CTF program team will continue to develop standardized communication and education tools, including a consolidated applicant and lender information package outlining program requirements, timelines, eligibility criteria, and documentation needs. CTF may also offer onboarding video recorded and made available on demand for both entrepreneurs and lenders, covering the loan guarantee structure, program process, and key

considerations related to climate technology risk. Collectively, these tools would improve consistency, reduce back-and-forth, and strengthen alignment across applicants, lenders, and CTF staff.

Application Tracker

To strengthen customer service and improve the applicant's experience, the CTF Program plans to develop an online deal tracker that allows applicants to view the status of their application as it moves through the CTF process. The tracker would clearly communicate where an application sits.

This improvement enhances transparency and reduces confusion for applicants, particularly first-time or early-stage companies navigating public financing for the first time. By providing self-service access to status updates, the deal tracker supports more responsive customer service, minimizes repetitive follow-up inquiries, and builds trust through clear and timely communication.

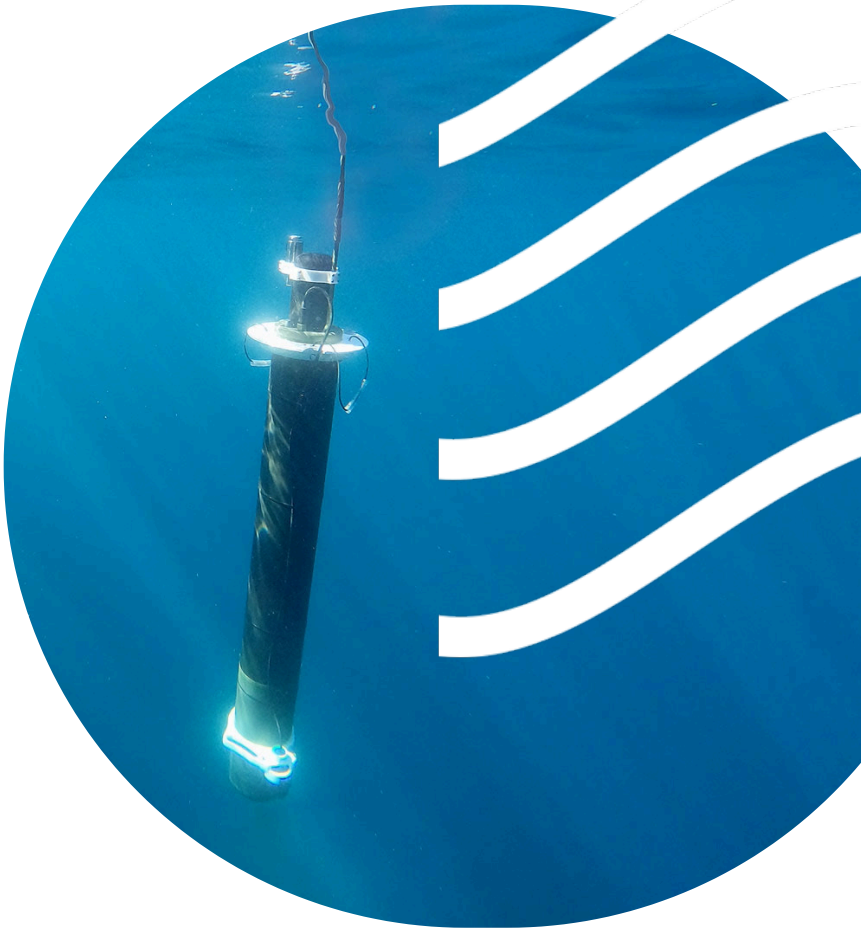
AP-5: Establish Refundable Intake Commitment Fee

To improve applicant readiness, reduce administrative burden, and ensure that staff time is focused on projects actively pursuing financing, the CTF Program may consider introducing a small, refundable intake commitment fee for applicants who proceed beyond the initial intake call and are invited to submit detailed financial information.

Under this approach, applicants would be asked to submit a modest upfront fee (e.g., $200–$300) after completing an intake conversation and prior to providing full financials. The fee would be fully refundable if the applicant withdraws from the Program or if a CTF-loan guarantee does not close within a defined period (e.g., 12 months).

This fee would serve as a signal of applicant readiness and seriousness, consistent with common practices in private-sector finance and advisory engagements. This structure would help filter out exploratory or premature applications, improve the quality of submissions, and allow CTF staff and consultants to allocate time more efficiently. To ensure equitable access, the Program may consider offering a waiver of the intake fee for applicants based in overburdened communities or those meeting defined equity criteria.

Because the Air District does not typically charge fees in voluntary programs, this concept would require further exploration before any implementation. This would include coordination with legal counsel and IBank to determine whether such a fee would be permissible under the program structure.



9 Conclusion

6-Conclusion

As directed by the Air District's 2024–2029 Strategic Plan, this Impact Assessment reflects on the CTF Program's performance, outcomes, and continued evolution as a critical tool for advancing climate innovation and environmental justice. The findings demonstrate that the CTF Program is not only meeting its objective to accelerate climate technologies, but is also strengthening its processes, partnerships, and equity-centered approach to better serve overburdened communities and the broader climate ecosystem. As California's climate finance landscape continues to evolve, the CTF Program remains well-positioned to fill capital gaps and catalyze scalable climate solutions. The recommendations outlined in this report will guide the program's next phase of growth, ensuring that CTF continues to maximize climate impact, expand equitable access to capital, and contribute meaningfully to regional, state, and global climate goals.

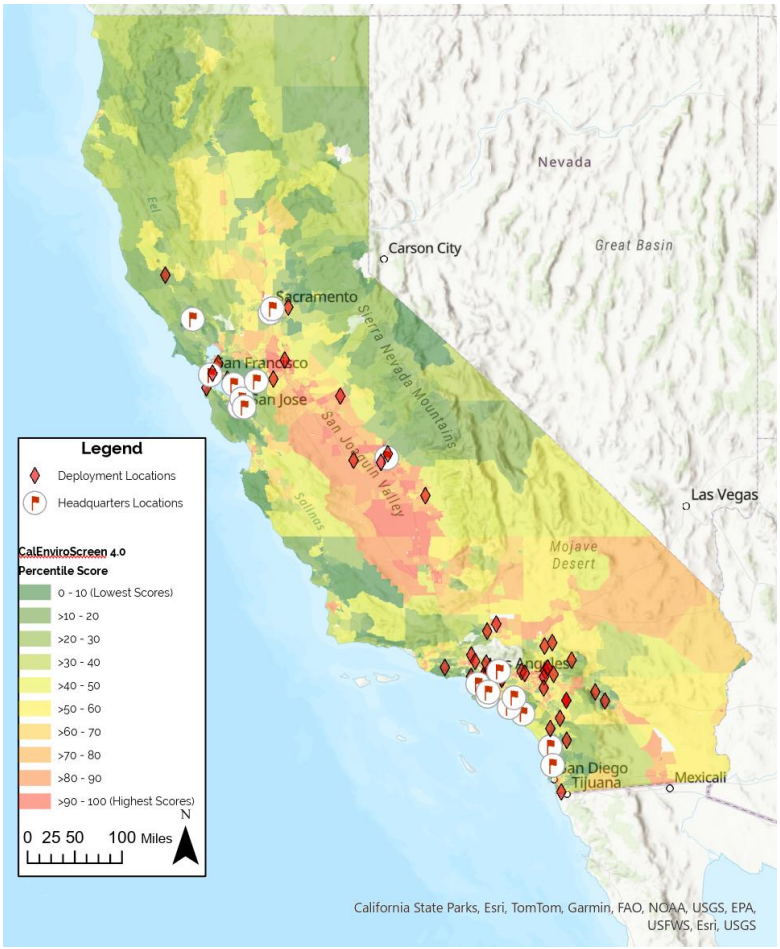
In a period of increasing financial uncertainty and shifting public funding priorities, the CTF Program demonstrates the value of disciplined, mission-driven credit enhancement as a sustainable public-sector tool. By combining technical rigor, financial leverage, and a commitment to environmental justice, CTF is positioned to continue mobilizing private capital, accelerating deployment of emissions-reducing technologies, and delivering measurable climate and community benefits for years to come.

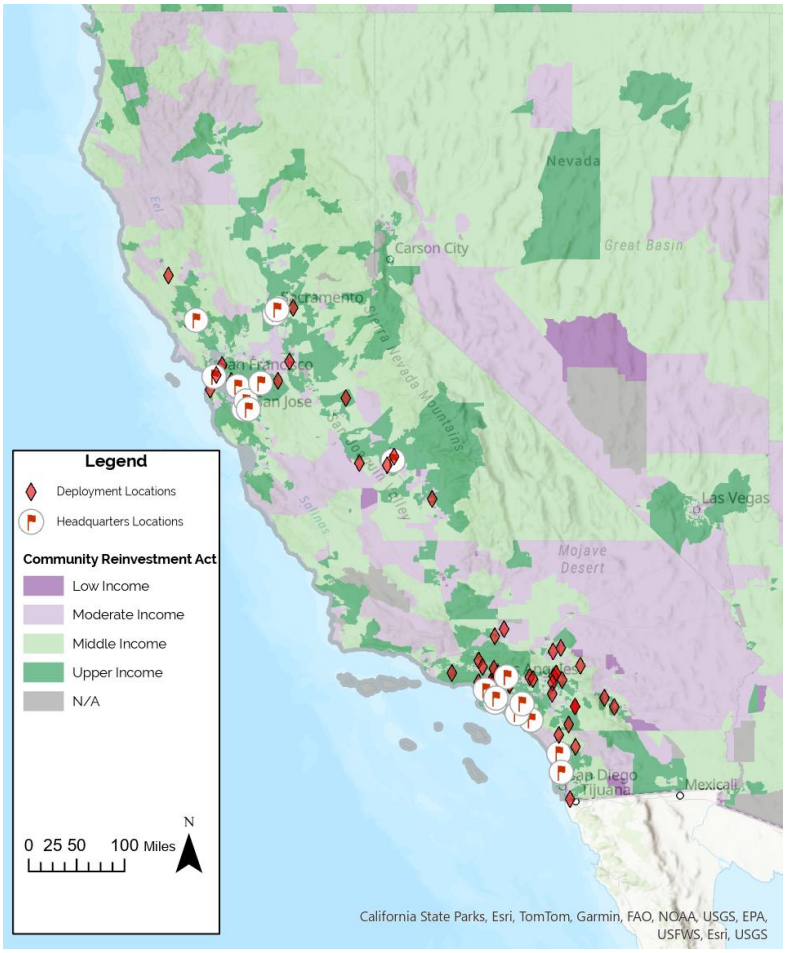
Appendices

Appendices

Appendix A: Equity Maps

(HQ and Deployments overlayed with 1. CalEnviroScreen, and 2. Low-and Moderate-Income (CRA))





Appendix B: Outreach/Awareness/Marketing

Case studies

CLIMATE TECH FINANCE

AVINA

Bay Area Air District

Financing the Future of Clean Hydrogen in Vernon, CA



Company: Avina Clean Hydrogen

Website: avinah2.com

Industry: Energy

Location: Vernon, CA

Employee Count: 20

Avina Clean Hydrogen, founded in 2021, is pioneering one of California's first large-scale clean hydrogen production facilities in Vernon, CA. The project is designed to deliver low-cost, zero-emission hydrogen to industries and fleets across Southern California.

Avina's Vernon site leverages renewable power and advanced electrolysis to produce hydrogen with no carbon emissions. By locating the facility in the heart of Los Angeles County's industrial corridor, Avina is positioning clean hydrogen where demand is greatest, helping the state meet ambitious climate goals and reducing reliance on fossil fuels.

Securing financing was critical to turn this vision into reality. With support from a Climate Tech Finance loan guarantee, Avina secured a financing package that de-risked the project.

OVERVIEW

4,000 kilograms-per-day (KGD) production capacity in initial phase. Full-containment, double-walled, 1-metric-ton storage tank.

Secure mobility offtake, on-site public retail use, and wholesale conveyance partners.

This project is expected to create estimated 50 construction jobs at peak and 12 - 20 operations jobs for greater the Los Angeles region.

APPROACH

Avina secured project financing through a combination of commercial bank loans, equity investment, and state-backed credit enhancements.

Climate Tech Finance, in partnership with IBank and PCR, provided a loan guarantee to lower lender risk and improve borrowing terms.

Stearns Bank provided working capital loans for equipment purchases and construction, enabled by the public guarantee structure.

RESULTS & IMPACT

$6.25M
loan from Stearns Bank

80% guarantee
of loan value by PCR

17,916
$MTCO_2e$ reduced annually

375 Beale St. San Francisco, CA 94105 www.ctf.baaqmd.gov ctf@baaqmd.gov

CLIMATE TECH FINANCE

STEARNS BANK

Bay Area Air District

Stearns Bank

Lending Partner Case Study

A Note from the Climate Tech Finance Program

Over the past year, Climate Tech Finance (CTF) has continued to expand its network of mission-aligned lending partners committed to accelerating real-world climate solutions. One of the newest additions to this network is Stearns Bank, a community bank bringing a thoughtful, responsive approach to climate-aligned finance.

Through close collaboration, CTF and Stearns Bank have worked together to advance credible climate projects while maintaining a shared focus on execution, quality, and long-term impact.

Partner Overview

Stearns Bank is a mission-driven community bank that integrates sustainability into its lending approach. Within the CTF program, the bank focuses on supporting climate-related projects that demonstrate clear deployment potential, experienced sponsorship, and the ability to scale.

By emphasizing quality, execution readiness, and alignment with long-term climate outcomes, Stearns Bank continues to participate actively in climate finance while maintaining a disciplined and thoughtful approach to project selection.

How We're Advancing Climate Impact Together

The program supports Stearns Bank by providing independent technical and climate eligibility reviews that help validate project assumptions and reduce friction in climate deal evaluation. This collaboration enables more efficient decision-making and strengthens lender confidence in climate-aligned opportunities.

The partnership is characterized by fast review cycles, clear communication, and a shared understanding of program goals. Stearns Bank's responsiveness and collaborative approach make it a strong complement to CTF's technical expertise.

Stearns Bank Partnership Impact
(Dec 2024 – July 2025)

- 3 climate-aligned deals supported
- $11.25M in loans supported through the partnership

Stearns Bank exemplifies the type of lending partner the CTF program is designed to support: mission-aligned, responsive, and focused on deploying high-quality climate solutions.

This partnership highlights CTF's role as a trusted technical partner—helping lenders move efficiently while advancing measurable climate impact.

Summary of the Board of Directors Special / Retreat Meeting

On January 29, 2025, the Climate Tech Finance Program delivered a presentation to the Bay Area Air District's Board of Directors during the Board of Directors special / retreat meeting. The presentation provided an overview of the CTF, the economic benefits of loan guarantees, global and regional trends in climate finance, challenges and opportunities in the sector, and successful case studies. The overview of CTF was followed by a panel discussion called, *Driving Climate Innovation: The Role of Capital and Government Action in a Sustainable Transition.*

The CTF team hosted the panel discussion to explore how climate tech is driving the transition to a sustainable economy, highlighting investment trends, opportunities, and challenges in the sector. Insights from the panelists included perspectives from financiers, policymakers, venture capitalists, local government, and startup founders. The panelists discussed the role of public and private financing, innovative funding mechanisms like loan guarantees, and the strategies needed to scale impactful technologies.

During the Board Question & Answer (Q&A) session, members expressed interest in several key aspects of the program. They inquired about CTF's financing structure, its impact on frontline communities and small businesses, and the accessibility of funding. Questions were raised regarding the deployment of sustainable technologies across California, challenges in scaling innovations—such as hydrogen storage capacity—and the stability of federal funding, with concerns about green bank funding uncertainty. The Board emphasized the importance of expanding the government's role in a company's capital stack and exploring financial mechanisms to support growing businesses. They also discussed the potential for CTF to become self-sustaining and generate revenue over time. Additionally, members highlighted the need for investments in climate adaptation, decarbonization, and wildfire prevention, particularly in AB617 communities. They underscored the importance of measuring greenhouse gas emissions, tracking company metrics annually, and improving diversity among funded company founders. While supportive of the program and its technological potential, the Board remained cautious about endorsing specific technologies, instead prioritizing co-benefits, disadvantaged businesses, and job creation in overburdened communities.



After the Board's Q&A, the meeting opened for public comment, with four speakers sharing their perspectives. The key takeaway was a strong interest in innovations that directly address

community concerns. Commenters emphasized that if technology does not meet immediate community needs, greater priority should be placed on regulations and inspections. There was concern about greenwashing, particularly in upstream refinery communities, and a call for CTF to focus on technologies that provide tangible local benefits. Building trust with communities was highlighted as essential, with strong interest in air monitoring equipment. Additionally, speakers advocated for violation fees to be reinvested into innovative programs and technologies within local communities, emphasizing the need for transparent and equitable distribution of funding.

In conclusion, the presentation and discussions at the Board of Directors Special / Retreat Meeting provided valuable insights into CTF's role in advancing climate innovation and economic growth. The Board's feedback underscored the importance of ensuring equitable access to funding, supporting the scalability of sustainable technologies, and strengthening government participation in climate tech finance. Public comments reinforced the need to align technological advancements with community priorities, build trust, and promote transparency in funding distribution. Moving forward, the CTF team will continue to refine its approach, incorporating these perspectives to enhance program impact and drive meaningful environmental and economic benefits.

San Francisco Climate Week 2025

Green Money, Green Impact — Unlocking Climate Capital from California's Green Bank

As part of San Francisco Climate Week 2025, the Climate Tech Finance Program hosted "Green Money, Green Impact," convening thought leaders, entrepreneurs, and public finance experts to address one of the state's most urgent challenges: unlocking capital for climate innovation. The event attracted over 100 attendees, with 229 registered from more than 200 organizations. Nearly half of the audience identified as startup or business leaders, alongside investors, researchers, and nonprofit representatives.



The event was facilitated by Areana Flores, CTF Staff, and opened with a keynote fireside chat between Scott Wu, CEO of the California Infrastructure and Economic Development Bank (IBank), and Grant Harrison, Vice President of Sustainable Finance at Trellis Group. They discussed how IBank is bridging the growing gap in federal climate finance through flexible, risk-aligned public capital strategies. As a general-purpose financing authority, IBank supports a broad range of infrastructure and economic development projects while prioritizing climate impact. Its toolkit, ranging from the Small Business Finance Center and municipal bond program to the Climate Catalyst Fund, has mobilized over $1 billion in clean technology and infrastructure investment. IBank's AAA credit rating and zero-default history continue to enable low-cost capital and attract private-sector co-investment.

Harrison emphasized how public-private partnerships remain essential in this evolving climate finance ecosystem. He pointed to the need for adaptive instruments, especially in light of federal funding volatility and recent litigation targeting clean energy programs. The conversation reaffirmed that state-level innovation—when coupled with mission-driven capital—can significantly advance both climate resilience and equitable economic growth.

The discussion highlighted the importance of adapting financing tools to match project risk profiles and emphasized how public-private partnerships are critical in a climate of increasing federal volatility. The conversation underscored California's leadership in aligning financial innovation with equity and resilience goals.

"What stood out most from Scott Wu's fireside chat?"



The second half of the event focused on specific IBank-led initiatives. Ross Kovwell, Chief Credit Officer, detailed major deals such as the $2 billion Brightline West high-speed rail bond and infrastructure loans for organic waste processing and groundwater recharge.

Patrick Toppin, leader of the Climate Catalyst Fund, described efforts to support commercially ready but hard-to-finance projects in areas like forest biomass, distributed energy, and zero-emission transport. The program uses loan guarantees, fund investments, and loan participations to leverage private capital for high-impact deployment.

Shrina Karani, Deputy Director of Venture Capital, spoke about building a more inclusive climate innovation ecosystem. IBank's VC program supports both funds and startups, with an emphasis on underrepresented founders and regions. Co-investment opportunities are available for companies with lead investors, and early capital has backed technologies ranging from energy storage to agricultural robotics.

Tamara Kohne of the Bay Area Air District outlined the Climate Tech Finance Program, a partnership with IBank that offers loan guarantees for California-based climate tech projects with proven technologies. The Air District conducts technical assessments and evaluates climate and equity impacts, while IBank de-risks financing through guarantees.

The session concluded with an interactive Q&A, covering adaptation, permitting, impact tracking, and underserved market access. Panelists reiterated the urgency of financing deployment-ready technologies and expanding equitable access to capital. As Scott Wu put it, "Climate change isn't going away. This is a time for all of us to step up." From bonds to venture to loan guarantees, IBank is helping California lead the charge in closing the climate finance gap.

CTF Program Webinars

Leveraging Government-Backed Guarantees for Financial Success

On April 8th, 2024, the CTF Program team hosted a webinar with financial experts to discuss structuring loans supported by government-backed guarantees. Speakers from the CTF Program (John Meredith and George McDaniel, Finance Leads), IBank (Megan Hodapp), and River City Bank (Rosa Cucicea) outlined the enrollment and participation requirements for the CTF loan guarantee program, highlighting key partners, program terms, lender onboarding, and IBank's guarantee performance, and River City Bank's experience with the CTF Program. Speakers then described the specific steps in the loan guarantee approval process, documentation, the funding itself, and default requirements. Panelists highlighted that the CTF loan guarantee program is more streamlined than many national counterparts, involves no lender fees, and may accept nontraditional lenders with FDC sponsorship. Lenders can bypass collateral liquidation if bankruptcy is filed or if they demonstrate insufficient collateral value or good faith liquidation efforts. CTF staff emphasized that timely borrower responsiveness is essential. Borrowers are first evaluated on technology viability, followed by a bank review of financials and cash flow. Early-stage companies without revenue may not qualify but can be referred to other programs.

Pitching to Climate Tech Lenders

On March 9th, 2023 the CTF Program team organized a webinar to help climate-tech entrepreneurs understand how to prepare a strong loan application for government-backed loan guarantee programs. Panelists from the CTF Program (John Meredith, Finance Lead), River City Bank (Rosa Cucicea), and Farmers & Merchants Bank (John Kachidurian) explained how the CTF loan guarantee works, its approval process, and what lenders look for when evaluating financing requests. Speakers highlighted the importance of clear, organized materials – including business summaries, financial statements, projections, and defined uses of funds – and recommended starting with a simple outline of the business, using storytelling to communicate why funding is needed. Speakers discussed how lenders assess technology readiness, repayment sources, and risks, and noted that while the program helps companies on the verge of bankability, lenders primarily rely on cash flow and proven technology in their evaluations of financing requests. The session ended with guidance on collateral, early-stage companies, project finance considerations, and how diverse capital stacks and strong sponsor commitment can support successful financing.

Sustainable Finance for a Sustainable Future

On October 6th, 2022 the CTF Program team coordinated a webinar with CTF Program partners to provide an overview of the Climate Tech Finance Program's government-backed loan guarantee model, featuring perspectives from the Climate Tech Finance Program (John

Meredith and George McDaniel, Finance Leads), IBank (Megan Hodapp), and River City Bank (Rosa Cucicea). Panelists explained how the program supports climate-focused small businesses by validating greenhouse-gas-reducing technologies and enhancing lenders' confidence through guarantees of up to 80% of eligible loans. Speakers detailed the roles of each partner, eligibility criteria, lender onboarding, the streamlined approval and documentation process, and typical timelines. River City Bank emphasized how the guarantee can help emerging clean-technology companies bridge early-stage risk and access capital more quickly. The session concluded with Q&A on lender-borrower expectations, commercialization readiness, alternative financing pathways, and how the program maintains speed, flexibility, and low historical default rates to help climate innovators scale.

Appendix C: Community Feedback

CTF Survey

Lender Survey Questions
0.0 What is the name of your financial institution or organization?

0.1. Does your institution have a specific geographic focus in California?
(Select all that apply)
- ☐ Northern California
- ☐ Central Valley
- ☐ Southern California
- ☐ Statewide
- ☐ No specific geographic focus

0.2. What sectors does your institution most frequently provide financing to? (*Select all that apply)*
- ☐ Commercial Real Estate
- ☐ Residential Real Estate
- ☐ Industrial
- ☐ Infrastructure
- ☐ Small & Medium Businesses (non-climate tech)
- ☐ Consumer Lending
- ☐ Climate Tech / Clean Technology
- ☐ Other (please specify): _____

If “Climate tech” is selected, proceed to Q4.4
0.3 Please rank the top 3 industry sectors your institution most frequently lends to (1 = most active).
- ☐ Transportation and Mobility
- ☐ Renewable Energy
- ☐ Energy Efficiency and Buildings
- ☐ Waste and Circular Economy
- ☐ Agriculture and Food Systems
- ☐ Other (please specify): _____

1. Engagement with CTF

1.1 Have you heard about the Climate Tech Finance (CTF) Program?
- ☐ Yes
- ☐ No

If yes, go to 1.2
If no, go to go to section 4

1.2 How familiar are you with the Climate Tech Finance (CTF) Program? *(Select one)*
- ☐ Familiar – I have actively worked with CTF applicants and funding

- ☐ Somewhat familiar – I know about the program but have limited direct engagement or never engaged with it
- ☐ Not familiar at all – I have no knowledge of the program

1.3 Have you worked with businesses applying for a loan with the CTF loan guarantee? *(Select one)*

- ☐ Yes, we have provided financing to CTF applicants
- ☐ Yes, but the applications did not result in financing
- ☐ No, but we are interested in working with CTF
- ☐ No, and we do not plan to

1.4 How does CTF's evaluation or support influence your lending decisions? (Select one)

- ☐ It's primarily the financial guarantee that matters
- ☐ It provides useful risk assessment beyond the guarantee
- ☐ It has little impact on my decision-making
- ☐ Other (please specify): _____

Are you aware that your institution can use the CTF loan guarantee for existing clients and receive client referrals through the CTF program?

2. Program Effectiveness

2.1 In your opinion, among all the benefits of CTF loan guarantees, which interest your lending institution the most? *(Select up to two)*

- ☐ Reduces financial risk for climate tech lending
- ☐ Expands our ability to finance climate-related projects
- ☐ Attracts new clients and business opportunities
- ☐ Helps meet sustainability and ESG lending goals
- ☐ Improves collaboration with public-sector funding partners
- ☐ Other (please specify)

2.2 What are the biggest barriers in working with CTF loan guarantees? *(Select up to two)*

- ☐ CTF loan guarantee process is too complex
- ☐ Program requirements do not align with our lending policies
- ☐ There is a lack of qualified applicants
- ☐ Communication with CTF staff needs improvement
- ☐ Loan terms or conditions are not competitive
- ☐ Lengthy approval timelines from FDCs
- ☐ Other (please specify)

2.3 How clear are CTF's policies and procedures for financial institutions? *(Likert Scale: 1 = Not clear at all, 10 = Extremely clear)*

2.4 What additional resources or support would help lenders work more effectively with CTF? *(Select all that apply)*

- ☐ More training on CTF policies and procedures
- ☐ A clearer process for applicant referrals and coordination
- ☐ Better communication and transparency from CTF staff

- ☐ More flexibility in financing structures
- ☐ Other (please specify)

3. Future Program Improvements

3.1 What additional financial tools or products would be helpful in the ecosystem? *(Select up to two)*

- ☐ Convertible/safe note from early-stage companies
- ☐ Revenue-based financing options
- ☐ Lower collateral requirements for loan guarantees
- ☐ Expanded partnerships with private equity and venture capital
- ☐ ☐ Other (please specify)

3.2 Net Promoter Score (NPS): How likely are you to recommend participation in CTF to other financial institutions or lenders? *(0 = Not at all likely, 10 = Extremely likely)*

3.3 What is one key improvement that would make CTF more effective for financial institutions? *(Open-ended response)*

4. Financial Landscape

4.1 How has the overall financing landscape for climate tech companies changed since 2020? *(Select one)*

- ☐ It has become much easier to secure funding
- ☐ It has become slightly easier
- ☐ No change
- ☐ It has become slightly harder
- ☐ It has become much harder

4.2 From your institution's perspective, what types of support are most needed to improve access to financing for underrepresented climate tech entrepreneurs? (Select all that apply)

- ☐ More targeted outreach efforts to underrepresented groups
- ☐ Easier access to funding for early-stage companies
- ☐ Reduced financial requirements for program eligibility
- ☐ Expanded grant opportunities alongside loans
- ☐ Lower interest rates on financing
- ☐ More inclusive eligibility criteria (e.g., solo founders, nonprofits, early-stage tech)
- ☐ Technical assistance and business advisory services
- ☐ Localized or community-driven programs
- ☐ Other (please specify): _____

4.3 What types of support do climate tech companies you've engaged need most? (Select up to three)

- ☐ Access to flexible early-stage capital
- ☐ Stronger partnerships with lenders or public finance programs
- ☐ Technical or regulatory validation (e.g., certifications, pilots)
- ☐ Better visibility to investors and public-sector partners
- ☐ More aligned ESG/sustainability messaging for funding opportunities

- ☐ Commercialization support (e.g., pilots, B2B or B2G introductions)
- ☐ Access to workforce development or talent programs
- ☐ Other (please specify): _____

Survey for Entrepreneurs

What is your company's name?

Where is your company headquartered or primarily based?

What industry sector does your company primarily work in?

- ☐ Transportation and Mobility
- ☐ Renewable Energy
- ☐ Energy Efficiency and Buildings
- ☐ Waste and Circular Economy
- ☐ Agriculture and Food Systems
- ☐ Other (please specify): _____

What type of climate tech solutions does your company primarily work on?

- ☐ Soft tech (e.g., software, digital platforms, data tools, or services)
- ☐ Hard tech (e.g., physical products, equipment, materials, or hardware systems)
- ☐ Both soft and hard tech

What is the current stage of development for your core climate technology?

- ☐ Idea or concept stage – still in early R&D or exploration
- ☐ Prototype or pilot stage – tested in lab or limited field setting
- ☐ Demonstration stage – tested in relevant environments or early customers
- ☐ Commercial stage – product or service is ready for or already in the market

1. General Awareness & Program Engagement

1.1 Have you heard about the Climate Tech Finance (CTF) Program?

- ☐ Yes
- ☐ No

If yes, go to 1.2

1.2 How did you first learn about the Climate Tech Finance (CTF) Program? *(Select one)*

- ☐ CTF website
- ☐ Social media (LinkedIn, Twitter, etc.)
- ☐ Referral from another entrepreneur
- ☐ Government agency or program (IBank, FDCs, etc.)
- ☐ Financial institution/lender
- ☐ Other (please specify)

1.3 Have you applied for or received financial support through CTF? *(Select one)*

- ☐ Yes, I have received financial support

- ☐ Yes, I applied but was not approved
- ☐ No, but I plan to apply in the future
- ☐ No, and I do not plan to apply

If answered “yes”, move to section 2
If answered “no”, go to section 3

2. Program Effectiveness

2.1 What were the most significant benefits you gained from CTF participation? *(Select up to three)*

- ☐ Access to loan guarantees or financing
- ☐ Support in connecting with lenders
- ☐ Improved credibility with investors or partners
- ☐ Expanded my business operations
- ☐ Increased ability to deploy my technology
- ☐ Other (please specify)

2.2 How has CTF funding impacted your ability to scale your business? *(Select one)*

- ☐ Improved scaling opportunities
- ☐ No impact on scaling
- ☐ Made scaling more difficult

2.3 Rank the following challenges in accessing CTF financing from most significant (1) to least significant (5):

- ☐ Complex application process
- ☐ Difficulty meeting financial requirements
- ☐ Limited available funding
- ☐ Lack of clarity on eligibility criteria
- ☐ Challenges in working with lenders

2.4 How easy was it to navigate the CTF application process? *(Likert Scale: 1 = Very difficult, 10 = Very easy)*

2.5 How satisfied were you with the level of support provided by the CTF technical team during the application process? *(Likert Scale: 1 = Not satisfied at all, 10 = Very satisfied)*

2.6 How satisfied were you with the level of support provided by the CTF finance leads during the application process? *(Likert Scale: 1 = Not satisfied at all, 10 = Very satisfied)*

2.7 What additional support do you need from finance leads? *(Select all that apply)*

- ☐ More guidance on structuring financing deals
- ☐ Clearer communication on eligibility and funding terms
- ☐ Faster decision-making process
- ☐ Stronger partnerships with lenders

☐ Other (please specify)

2.8 Have you worked with new lenders through CTF? *(Select one)*

- ☐ Yes, and it was a positive experience
- ☐ Yes, but it was a challenging experience
- ☐ No, but I would be interested
- ☐ No, and I do not plan to

3. Future Program Improvements

3.1 Rank the following potential CTF improvements in order of importance (1 = Most Important, 5 = Least Important):

- ☐ Faster loan approval process
- ☐ Expanded funding options
- ☐ Stronger partnerships with lenders
- ☐ More support for early-stage companies
- ☐ Improved transparency in funding decisions

3.2 What additional financial tools or products would be helpful in the ecosystem? *(Select up to two)*

- ☐ Convertible/safe note from early-stage companies
- ☐ Revenue-based financing options
- ☐ Lower collateral requirements for loan guarantees
- ☐ Expanded partnerships with private equity and venture capital
- ☐ Other (please specify)

3.3 Net Promoter Score (NPS): How likely are you to recommend CTF to other climate tech entrepreneurs? *(0 = Not at all likely, 10 = Extremely likely)*

3.4 What is one key improvement that would make CTF more valuable for your business? *(Open-ended response)*

4. Access to Capital, Equity and Environment

4.1 How has the overall financing landscape for climate tech companies changed since 2020? *(Select one)*

- ☐ It has become much easier to secure funding
- ☐ It has become slightly easier
- ☐ No change
- ☐ It has become slightly harder
- ☐ It has become much harder

4.1 What types of support are most needed to improve access to financing for underrepresented climate tech entrepreneurs? *Select all that apply)*

- ☐ More targeted outreach efforts
- ☐ Easier access to funding for early-stage companies
- ☐ Reduced financial requirements for eligibility
- ☐ Expanded grant opportunities alongside loans
- ☐ Lower interest rate
- ☐ Technical assistance or business support services

Other (please specify): _____

4.2 Does your company currently support workforce development efforts?
(Examples include job training, local hiring, apprenticeships, or upskilling workers)

- ☐ Yes
- ☐ No
- ☐ Not yet, but we plan in the future

4.3 Is your company currently engaging with community organizations as part of your business operations or project implementation?
(Select the option that best describes your approach)

- ☐ Yes, community engagement is a core part of our operations
- ☐ Somewhat – we've started engaging or plan to, but it's limited
- ☐ No, but we would be interested with the right support
- ☐ No, and we are not currently planning to

If you are not actively engaging, what type of support would help you do so?
(Select all that apply)

- ☐ Introductions to relevant community-based organizations
- ☐ Guidance on best practices for community partnerships
- ☐ Resources or funding for local engagement
- ☐ Templates or toolkits for outreach and collaboration
- ☐ Other (please specify): _____

Who are your target customers and market segments? (text)
(Briefly describe your intended users or buyers, and geographic or industry focus)

4.6 How do you measure the environmental or social impact of your project?

- ☐ Internal tracking/metrics
- ☐ Third-party evaluation
- ☐ Not currently measured

General Survey

Who do you represent?

- ☐ Lenders
- ☐ Entrepreneurs
- ☐ Venture Capital/Investor
- ☐ Incubator/Accelerator
- ☐ Consultant/Advisor
- ☐ Government agency or public funding program
- ☐ Industry group
- ☐ Non-profit
- ☐ Individual
- ☐ Community member

1. General Awareness & Role

1.1 Have you heard about the Climate Tech Finance (CTF) Program?

- ☐ Yes
- ☐ No

If yes, go to 1.2

If no, go to section 5

1.2 How did you first learn about the Climate Tech Finance (CTF) Program? (Select one)

- ☐ CTF website
- ☐ Social media
- ☐ Referred by a startup or founder
- ☐ Government agency or program
- ☐ Financial institution/lender
- ☐ SF Climate Week event
- ☐ Other events
- ☐ Other (please specify): _____

1.3 Have you worked with any companies that have received or applied for support through the CTF program?

- ☐ Yes
- ☐ No
- ☐ Not sure

2. Program Perception & Impact

2.1 What benefits do you believe the CTF loan guarantee program offers to the climate tech ecosystem? (Select up to three)

- ☐ De-risking of early-stage technology deployment
- ☐ Bridging private and public financing
- ☐ Enhancing credibility for startups
- ☐ Helping startups secure follow-on funding
- ☐ Aligning with state climate and innovation goals
- ☐ Other (please specify): _____

2.2 From your perspective, how can CTF better support climate tech startups?

- ☐ Greater alignment with private capital sources
- ☐ Better outreach and visibility
- ☐ Faster decision timelines
- ☐ More flexible eligibility criteria
- ☐ Stronger technical or commercialization support
- ☐ Other (please specify)

2.3 Have you recommended CTF to startups or clients in your network?

- Yes, regularly
- Occasionally
- No, but I would be interested in doing so
- No, and I do not plan to

3. Collaboration Opportunities

3.1 In what ways would you like to collaborate with the CTF program? (Select all that apply)

- ☐ Refer promising companies to CTF
- ☐ Co-develop educational resources or events
- ☐ Share market or technical due diligence insights
- ☐ Participate in future feedback or roundtable sessions
- ☐ Other (please specify)

3.2 What would increase your likelihood of referring companies to CTF? (Select all that apply)

- ☐ Clearer eligibility criteria
- ☐ Case studies of past success stories
- ☐ Streamlined application materials
- ☐ Faster response time from the program team
- ☐ Co-branding or visibility opportunities
- ☐ Other (please specify)

4. Program Feedback

4.1 Net Promoter Score (NPS): How likely are you to recommend CTF to climate entrepreneurs in your network? (0 = Not at all likely, 10 = Extremely likely)

4.2 What one key improvement would make CTF more effective?

5. Equity & Innovation Landscape

5.1 What types of support are most needed to advance equity and access for underrepresented entrepreneurs in climate tech? (Select all that apply)

- ☐ More targeted outreach efforts to underrepresented groups
- ☐ Easier access to funding for early-stage companies
- ☐ Reduced financial requirements for program eligibility
- ☐ Expanded grant opportunities alongside loans
- ☐ Lower interest rates on financing
- ☐ More inclusive eligibility criteria (e.g., solo founders, nonprofits, early-stage tech)
- ☐ Technical assistance and business advisory services
- ☐ Localized or community-driven programs
- ☐ Other (please specify): _____

5.2 What types of support do climate tech companies in your network need most? (Select up to three)

- ☐ Access to flexible early-stage capital
- ☐ Stronger partnerships with lenders or public finance programs
- ☐ Technical or regulatory validation (e.g., certifications, pilots)
- ☐ Better visibility to investors and public-sector partners
- ☐ More aligned ESG/sustainability messaging for funding opportunities
- ☐ Commercialization support (e.g., pilots, B2B or B2G introductions)
- ☐ Access to workforce development or talent programs
- ☐ Other (please specify): _____

Community Investment Office Survey

In order to better serve overburdened communities through the CTF program, it's important to understand community needs and priorities regarding climate tech and air quality improvements. As a best practice, it is important to review any surveys or needs assessment to date, before surveying communities for a new initiative.

Between March and June 2025, the Air District's Community Investments Office conducted an anonymous survey to gather input from the Bay Area community on how funds from enforcement actions should be allocated.

In May 2024, the Air District established the Community Benefits Penalty Funds Policy to direct penalty funds from air quality regulation violations back to the communities where violations occurred, which generated over $124 million to date. Funds are being administered by the Air District's Community Investments Office (CIO).

Feedback received from the survey will help shape CIO's strategy to ensure that investments address local and regional priorities and promote environmental justice. The Survey results can be leveraged to inform work outside of CIO's scope, as the survey provides insights into what Bay Area residents want to see funded when it comes to climate tech and air quality improvements. With over 1,000 responses, the survey reveals strong public demand for immediate, visible investments in solutions that reduce pollution, improve indoor air quality, and advance environmental justice.

Key insights relevant to the CTF Program include:

- Strong community support for projects like air filtration in schools, electrification of home appliances, clean transportation, urban greening, and community air monitoring.
- Clear preferences for tangible action over planning or demonstration projects. Residents want to see funding go toward shovel-ready efforts that deliver real health and climate benefits now.
- Equity-driven outcomes, with many advocating for support to renters, low-income households, and communities overburdened by industrial pollution.
- Enthusiasm for clean technologies, especially those that offer co-benefits like workforce development, home retrofits, and public health resilience.

CTF can help bring these priorities to life by providing loan guarantees for small businesses launching or deploying climate technologies within the local community, which can help to maximize CTF's benefits for communities, and leverage CIO funds. Many small businesses struggle to secure loans because they lack collateral, have limited credit histories, or operate on tight margins. A loan guarantee de-risks these loans by covering a portion (e.g., 80%) if the borrower defaults. This encourages banks and credit unions to lend where they otherwise wouldn't. By blending grants, investments, and financing tools like the CTF Loan Guarantee Program, it can accelerate deployment of high-impact projects while ensuring long-term sustainability and equitable access to clean air and resilient communities.

Another community initiative at the Air District that can help the CTF Program understand community needs and priorities regarding climate tech and air quality improvements in the AB617 Program and Community Emissions Reduction Plans.

AB 617

CTF conducted an analysis of emissions and exposure reduction strategies from the Air District's completed CERPs for West Oakland, Richmond/North Richmond/ San Pablo, and East Oakland that align with the CTF Program, and provide opportunities to respond to community needs by leveraging the CTF Program in implementing CERP strategies. These CTF-aligned CERP strategies include zero-emission vehicle infrastructure, sustainable freight technologies, renewable energy deployment and workforce development, solar generators, air filtration and building electrification, urban greening, and circular economy initiatives.

Loan guarantees can serve as a catalytic financing tool to accelerate the development of technologies in AB617 communities and help to implement CERP-aligned projects by:

- Unlocking private capital for small businesses, freight operators, building owners, and local jurisdictions who may lack access to traditional financing.
- De-risking innovative technologies like hydrogen freight equipment, clean appliance retrofits, and energy storage systems that can improve air quality and reduce climate emissions.
- Driving co-benefits across climate, health, and economic development by supporting projects that improve indoor air quality, reduce asthma triggers, transition polluting equipment, vehicles, and freight, and create green jobs.

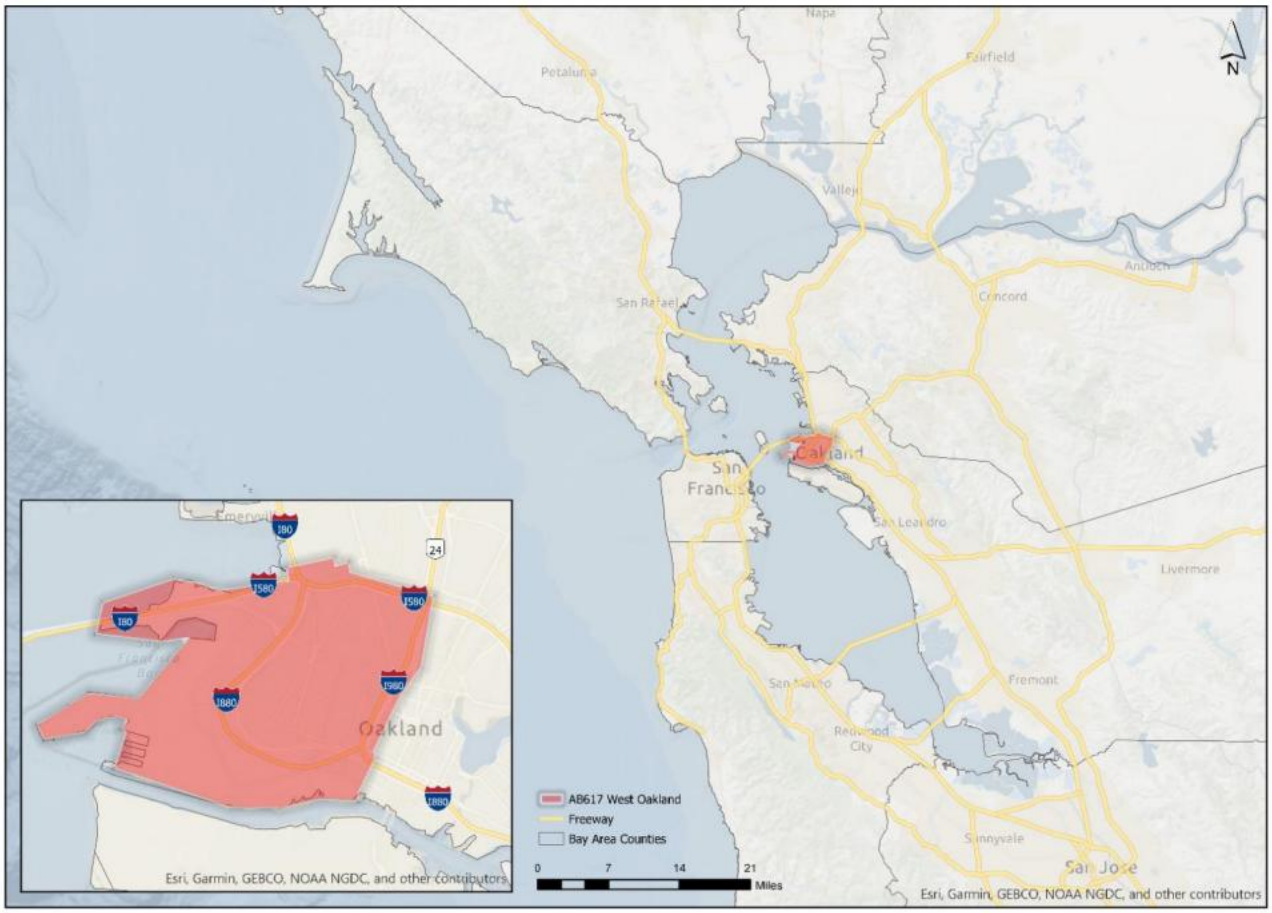
By integrating loan guarantees into the funding strategy for CERP implementation, the CTF program can extend the reach of public dollars, attract private investment, and support a just transition in overburdened communities.

For example, one of the key strategies in the Richmond/North Richmond/San Pablo CERP, for the fuel refining sector, is to move towards a Just Transition, A Just Transition is a defined by the Climate Justice Alliance as a "vision-led, unifying and place-based set of principles, processes, and practices that build economic and political power to shift from an extractive economy to a regenerative economy" and that the "transition itself must be just and equitable."[1] As an overburdened community impacted by the largest refinery in Northern California, the Chevron Richmond Refinery, a Just Transition for workers and communities is central to ending the refining and combustion of fossil fuels. By de-risking innovative technologies that don't rely on the combustion of fuels, the CTF Program can help to create new, greener economies that can provide both the technologies to reduce emissions and pathways for former refinery workers, for example, to transition to greener economy jobs.

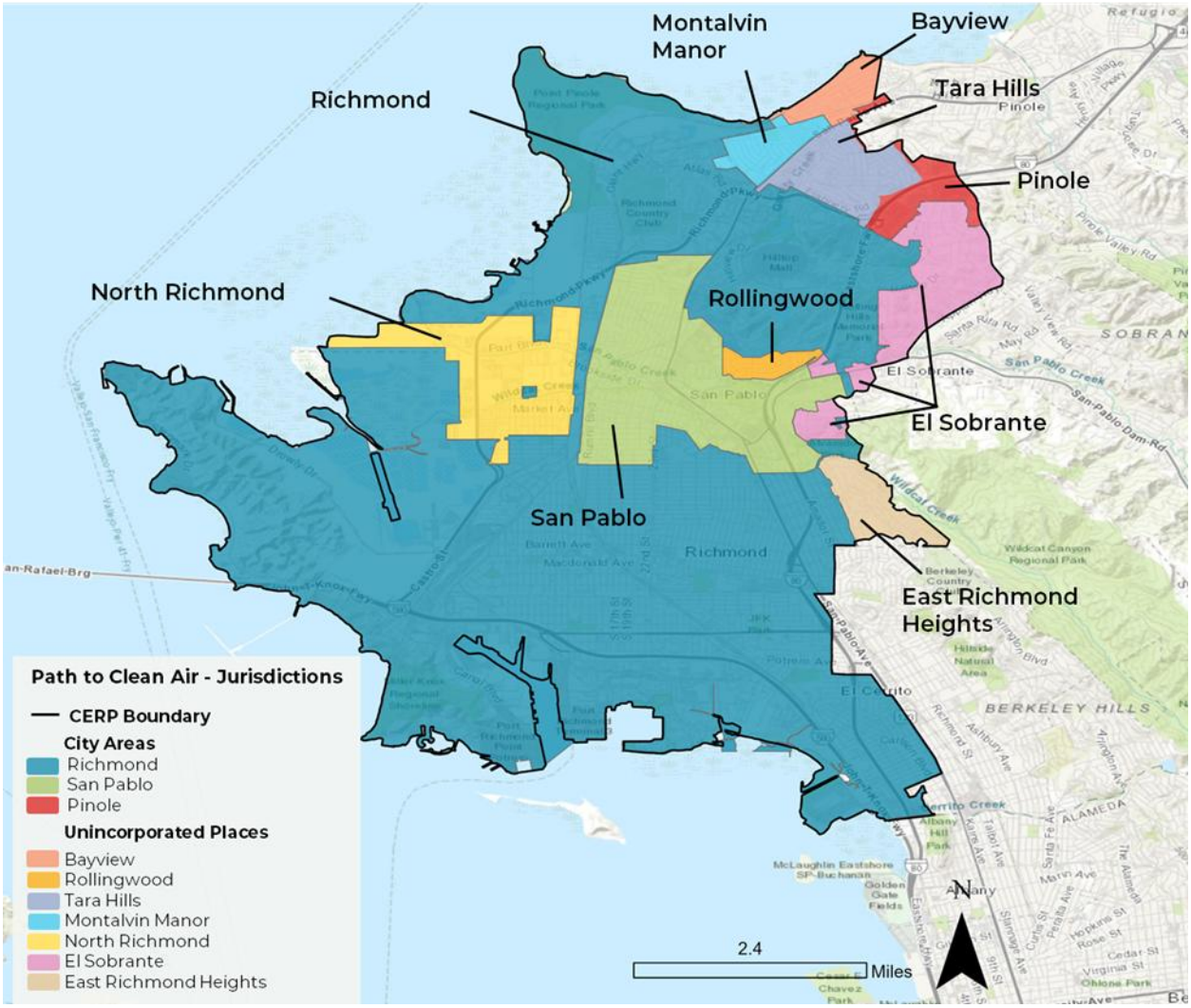
Maps of the AB617 CERP community boundaries for completed CERPs are included below. At the time this report was written, the Air District and community partners were still developing the CERP for the Bayview Hunters Point/Southeast San Francisco (BVHP) community. Once developed, the CTF Program will coordinate with the BVHP team for any additional areas of alignment between emissions and exposure reduction strategies and the CTF Program.

[1] Climate Justice Alliance. Just Transition. https://climatejusticealliance.org/just-transition-2/

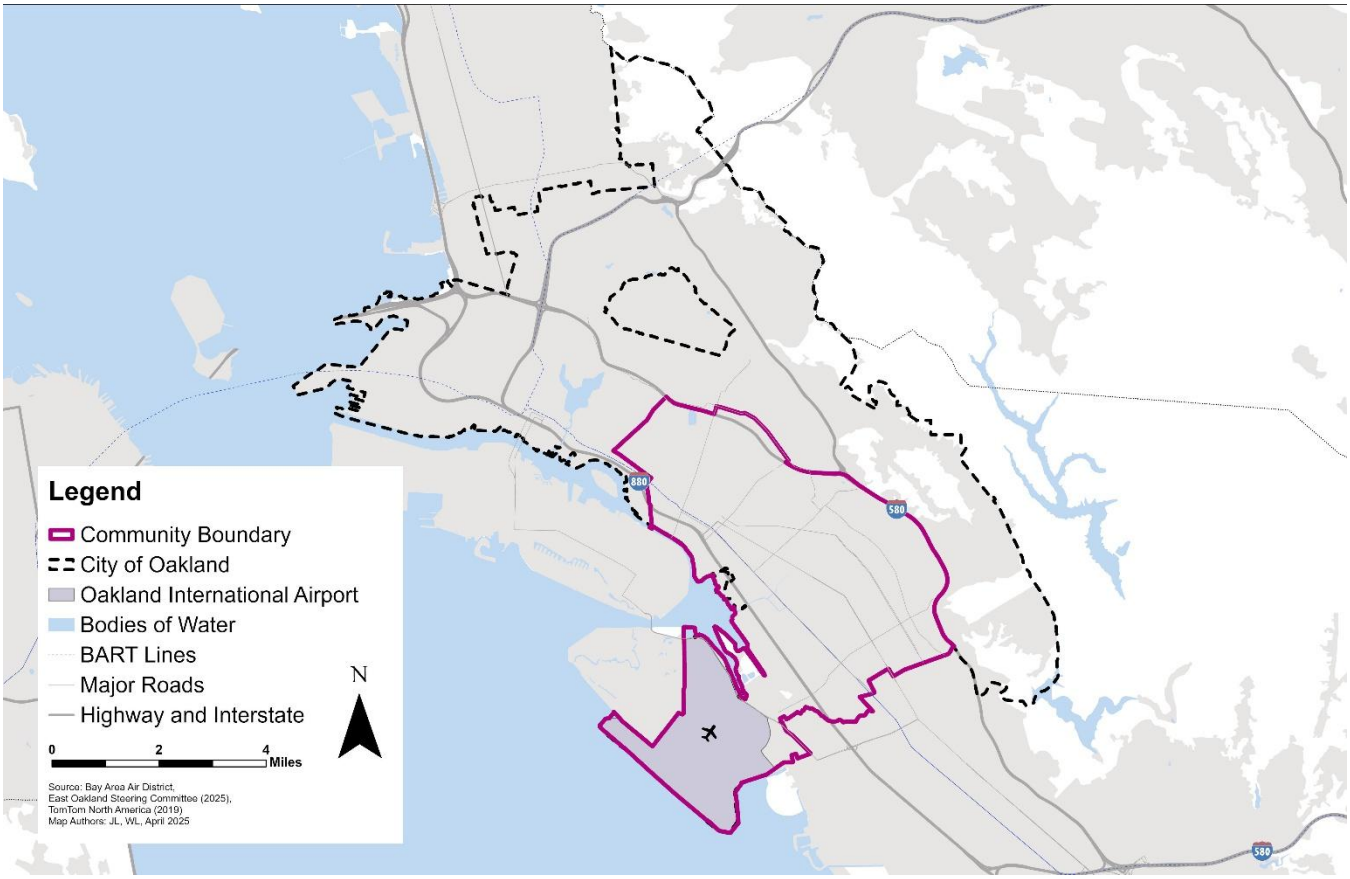
West Oakland



Richmond/North Richmond/San Pablo



East Oakland



Appendix D: IBank and Other Loan Guarantee Programs

IBank's Programs

Program	Description
Small Business Finance Center	Created in 1968, the Small Business Finance Center supports small businesses throughout California through various programs including: • Small Business Loan Guarantee Program • Disaster Relief Loan Guarantee Program • Climate Tech Finance Loan Guarantee Program • Farm Loan Program • Jump Start Program
Bond Financing Program	IBank is a general purpose conduit bond issue, and issues tax-exempt and/or taxable bonds on behalf of a borrower and then lends those proceeds to that borrower. Types of IBank bond financing include: • 501(c)(3) Bonds • Exempt Facility Bonds • Public Agency Revenue Bonds • Industrial Development Bonds
Infrastructure State Revolving Fund (ISRF) Loan Program	The ISRF Program provides direct low-cost public financing to state and local government entities. Financing is available in amounts ranging from $1 million to $65 million with loan terms for the useful life of the project up to a maximum of 30 years.
Expanding Venture Capital Access Program	The Expanding Venture Capital Access Program seeks to increase the inclusivity in the venture capital ecosystem by: • Supporting underrepresented venture capital managers • Investing in underrepresented and underserved entrepreneurs and business owners. • Investing in geographic areas that are socio-economically disadvantaged or that receive very limited venture capital funding. • Promoting climate equity and climate justice. The Program focuses on venture capital fund managers targeting fund sizes of at least $50 million and can also co-invest directly in startups that have secured a lead investor in the current financing round. The Program is funded in part through the State Small Business Credit Initiative (SSBCI 2.0) Program.
Climate Catalyst Revolving Loan Fund (Climate Catalyst Program)	The Climate Catalyst Program was established in 2020 to advance IBank's role as a California green bank, and to prioritize equitable inclusion in the climate transition, and offer a range of financial instruments to help bridge financing gaps, and help climate technologies to scale into the marketplace. This program supports projects that advance California's climate goals, through both climate mitigation and adaptation,

Other Loan Guarantee Programs

Program Name	Administered By	Guarantee Coverage	Typical Loan Terms	Fees (Type / Frequency)	Notes / Use Case
SBA 7(a) Loan Guarantee	U.S. Small Business Administration (SBA)	Up to 85% (<$150k) / 75% (>$150k)	Up to $5M, 10–25 yrs	One-time upfront guarantee fee: 2%–3.75% of guaranteed portion (varies by size); Annual fee: ~0.55% of outstanding balance (recurring)	Most common small-business guarantee. Covers working capital, acquisition, or debt refinancing.
SBA 504 Loan Program	SBA / Certified Development Companies	40% of project cost	10–25 yrs	One-time fees: ~3% of SBA portion (includes CDC + SBA + funding costs); Servicing fee: ~0.625% annual	Long-term fixed-rate loans for equipment/real estate; structured financing.
DOE Loan Programs Office (LPO)	U.S. Department of Energy	Up to 80–100% depending on project	10–30 yrs	One-time application fee ($50k–$400k) + Facility fee (0.5–1%) at closing + Maintenance fee ($10k–$200k/yr)	Closed as of October 16, 2025. Used to support clean energy and infrastructure projects; project-finance scale.
HUD Section 108 Loan Guarantee	HUD	Up to 100% of principal & interest	≤ 20 yrs	One-time fee: 1.5% of principal (borrower pays to HUD)	Municipalities leverage CDBG funds to borrow for infrastructure and community projects.
USDA Single-Family Housing Guaranteed Loan	USDA Rural Development	90% of loan note	≤ 30 yrs	One-time upfront fee: 1% of loan amount; Annual fee: 0.35% of remaining balance	Rural home loans with 0 down; lender protection ensures low-rate mortgages.
USDA Business & Industry (B&I) Guarantee	USDA Rural Development	60–80% (tiered by loan size)	7–30 yrs	One-time guarantee fee: 3% of guaranteed amount; Annual renewal fee: 0.5%	Encourages rural business credit; job creation emphasis.
SSBCI Loan Guarantee Programs (national umbrella)	U.S. Treasury / State partners	50–80% typical	Up to $5M	Varies by state: typically 1–3% one-time fee; few charge small annual servicing fee	Federal-to-state framework; states customize details using Treasury capital.