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A Call to Invest in Community Power

ABRIDGED VERSION

Lessons from 10 Years of California Climate Investments for the State and the Nation

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A note on selected terms used in this report:

- We use “Disadvantaged Communities” as a technical term defined by CalEPA using CalEnviroScreen which uses criteria relevant to pollution burdens and socioeconomic conditions in a place, and also includes federally recognized tribal areas.
- The Greenhouse Gas Reduction Fund (GGRF) referenced in this report refers to the pool of funding that represents the State’s portion of California’s cap-and-trade revenue, not the GGRF program established through funding from the federal Inflation Reduction Act (IRA).

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Note: This report is the complement to a full-version report of the same research that will be released in early 2024.

PREFACE

At the time of this report's release—February 2024—our society stands at a crossroads—a juncture where our choices today will profoundly shape our collective future. In the U.S. and beyond, the relentless pursuit of profit and power has led to the rapid degradation of our planet. At the same time, these pursuits have deepened racial inequality, paving the way for the systematic exploitation and marginalization of communities of color, particularly Indigenous, Black, and Brown communities.

Now, in the midst of concurrent crises—climate destabilization, global and domestic conflict, economic uncertainty—these communities face the worst impacts with the least amount of resources and power to mitigate them. This has not happened by chance. It is the result of decades of policies of discrimination and disinvestment.

Yet, communities of color continue to illuminate a path forward. In the U.S., despite bearing the worst impacts of living through environmental racism, they have risen to lead the way on climate policy solutions and fortify their own resilience. In California, they have been the vanguard, demonstrating the power of locally driven climate solutions to effect lasting, meaningful change. But in order to continue doing this essential work, communities of color need support.

In this report, *A Call to Invest in Community Power,* we investigate California Climate Investments (CCI), the nation's longest running dedicated portfolio of climate investments with equity provisions that have the potential to put power and resources in the hands of communities on the frontlines of the climate crisis. With a 10-year track record, CCI offers crucial lessons and evidence that can help state and federal governments address inequitable systems that fuel the climate crisis, while creating a path for urgently needed climate solutions in the places that face the greatest threats.

Overall this report offers something novel: the most comprehensive third party equity analysis of CCI today. Through intensive research, conversations, and analysis, our teams delved into the heart and details of CCI, engaging with 100-plus interviewees and stakeholders. Our goal in presenting this report is to be of assistance to all climate stakeholders in ensuring more equitable outcomes from public climate investments in California and beyond. The findings reveal CCI's progress in promoting equity, areas where further work is needed, and instances where the promise of equity has fallen short.

This analysis also uncovers the secret to when CCI has been most successful: when there is strong community power and voice. At the core of this initiative lies the tenacity of communities to steer cap-and-trade revenues towards priority places, sustain vital programs, and reshape policies to deliver more benefits. It is a testament to the unyielding force of community leadership, and is a call to action to support similar efforts around the country.

This is our moment of reckoning. Our communities are demanding change, and the realization of the promise of a more just and sustainable future. Together, we can choose the path that uplifts, empowers, and liberates the communities that have long been marginalized. Our choice today will define the legacy we leave for future generations, and we must choose wisely.

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INTRODUCTION

The patterns of deep environmental, economic, and health inequality we see today cannot be decoupled from the history of systemic racism in policy decisions. In California and nationwide, the disproportionate placement of undesirable infrastructure—oil and gas wells, industrial facilities, waste sites, highways, railroad tracks—in communities of color have led Indigenous, Black, and Brown residents to experience greater pollution burdens and suffer attendant health disparities.[1] Simultaneously, discriminatory practices like redlining and decades of disinvestment have held communities of color back from opportunities to build wealth and economic security relative to white residents.[2] Formerly redlined neighborhoods also reflect patterns of adverse environmental outcomes: less tree cover, higher temperatures, and higher flood risks.[3] In the face of worsening climate change impacts, these historically harmed communities stand as some of the most vulnerable and least resourced.

As state and federal policymakers work to address climate change through climate investments that reduce greenhouse gas (GHG) emissions and build resilience—for instance, solar panels, clean transportation, urban greening, transit-oriented housing development—it is critical that investments are geared to support the communities that have been historically marginalized and left behind. One such example is the Biden Administration's Justice40 (J40) initiative which promises to invest 40% of selected federal funds in communities considered "disadvantaged," meaning they face disproportionate environmental, climate, or other burdens.[4] These focused investments are intended to address the unequal impacts of climate change on disinvested communities, as well as the traditional public funding approaches that have historically left these communities with significantly fewer resources to withstand and respond to climate change. J40 is, in part, a response to calls for equitable climate action by environmental justice (EJ) advocates for decades.

California has piloted its own climate funding initiative with an intentional emphasis on equity for the past 10 years. California Climate Investments (CCI) includes $22.6 billion appropriated and $9.3 billion implemented, and over the past decade, has revealed some important lessons. This report, *A Call to Invest in Community Power,* takes a critical look at CCI to identify these lessons and assess how they can be applied and scaled. As of November 2022, nearly $10 billion of projects have been implemented throughout the state and twice that amount has yet to be implemented.[5] With nearly 10 years of progress in place, we seek to answer the following questions:

- Where have CCI funding dollars gone, and who did they serve?
- Has CCI centered marginalized communities—particularly low-income communities and communities of color—in its goals, processes, and outcomes?
- What are strengths of the initiative that should be replicated and scaled? And what are shortcomings that should be addressed and avoided in the future?

South LA Eco-Lab site visit in 2022.
PHOTO CREDIT: SLATE-Z.

Overall, we find that California Climate Investments includes aspects that are excellent with regard to equity, areas where delivering on equity can be improved, and a small number of places where the promise of equity has been derailed. But the secret to CCI's success is the strong environmental justice ecosystem that mobilized outside pressure to steer cap-and-trade revenues towards priority communities, to maintain funding for the most important programs, and to shape programs in ways that center frontline communities.

For CCI, J40, and state-based efforts to realize their equity commitments, they must focus on several key elements: ambitious goals, strategic scaling, effective implementation, enhanced community capacity, growing community power, and agency accountability. While much of the burden of this work falls on state agencies, there is a clear role for philanthropy to support the climate and environmental justice ecosystem.

In light of unprecedented federal funding for climate investments, it is essential to answer these questions and apply learnings to investments going forward to ensure climate solutions do not exacerbate existing environmental disparities. The findings in this report can and must be utilized to ensure the impacts of climate investments match their intent. California shows us that it's possible, and our communities tell us it's urgent.

BACKGROUND ON CALIFORNIA CLIMATE INVESTMENTS

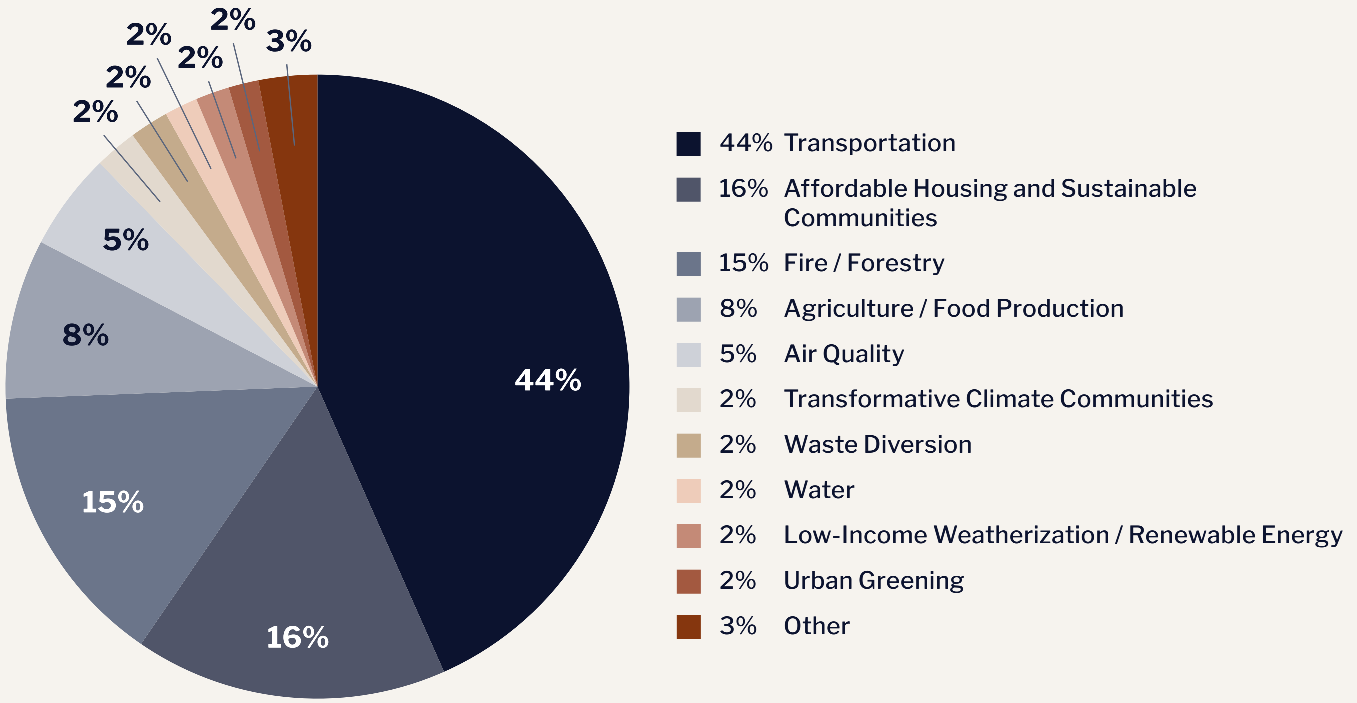
In 2006, the California Global Warming Solutions Act (AB 32) mandated the state to reduce greenhouse gas (GHG) emissions to 1990 levels by 2020, and to maintain and continue reductions beyond 2020.[6] To meet these targets, the California Air Resources Board (CARB) established the cap-and-trade program as a key strategy in 2012.[7] CCI represents the suite of programs funded by the state's portion of cap-and-trade auction proceeds. These funds are stored in a repository called the Greenhouse Gas Reduction Fund (GGRF) and from there, appropriated by the legislature to agencies for various programs.[8] At this time, about 65% of GGRF is continuously appropriated to selected programs; the remaining 35% is appropriated to different agencies through an annual budgeting process led by the legislature.[9]

CCI includes over 70 different programs implemented by over 20 different state agencies since its inception. In aggregate, these programs are intended to reduce GHG while producing environmental, economic, and health co-benefits. CCI programs support transportation, housing and land use, forestry, urban greening, technical assistance, water infrastructure, and many other climate projects.[10] There is a substantial body of statutes that direct how CCI programs are designed and implemented. Two critical statutes are SB 535 and AB 1550, which require that a minimum of 25% of CCI program dollars benefit DACs and another minimum of 10% benefit low-income households and communities.[11] Together, these groups are called "Priority Populations."[12]

As of November 2022, more than $9.3 billion for projects have been implemented in communities throughout California by CCI programs, in addition to $4.3 billion in expenditures by the High-Speed Rail Project, totaling $13.6 billion in implemented dollars.[13] Figure 1 shows the project types that have been implemented under CCI as of November 2022, excluding the High-Speed Rail Project and administrative expenses. Projects related to transportation have received 44% of implemented dollars.[14] The Affordable Housing and Sustainable Communities program makes up the next largest category at 16% of implemented CCI dollars, followed by Fire / Forestry (15%), Agriculture / Food Production (8%), and Air Quality (5%). Other categories have received less than 2% each in implemented dollars.

Of note: many EJ advocates fought against cap-and-trade as one of the key strategies through which to meet AB 32 requirements, as they forecasted this market-based mechanism would concentrate GHG co-pollutants in already pollution-burdened communities.[15] As it became clear California would ultimately establish cap-and-trade, EJ and other advocates built pressure for the revenues to be invested in overburdened communities, which was codified through SB 535 and AB 1550. As a result, advocates have high expectations for these cap-and-trade revenue dollars to truly land in and benefit DACs. EJ advocates have continued to fight for legislation and funding that support their communities and make CCI more equitable—context that is discussed further in this and the extended version of this report.

Figure 1: GGRF Dollars Implemented by Program Categories as of November 2022 ($9.2 Billion)



Source: USC Equity Research Institute analysis of California Air Resources Board Detailed Implemented Projects Dataset (Project Data as of November 30, 2022); California Office of Environmental Health Hazard Assessment, "CalEnviroScreen 4.0," October 2021.

Note: Implemented GGRF dollars used in this analysis exclude the High-Speed Rail Project and administrative costs. The categories listed here were created by the Greenlining Institute and the USC Equity Research Institute. The "Other" category includes programs focused on Land Restoration / Conservation, Training / Workforce, Climate Adaptation, Low Carbon Fuels Production, and Technical Assistance.

METHODOLOGY AND EQUITY ANALYSIS FRAMEWORK

Performing an equity-focused analysis of CCI requires a framework against which to measure the initiative's design, processes, and outcomes. Our framework builds on our prior work: The Greenlining Institute's "Six Standards for Equitable Community Investment" and the USC Equity Research Institute's "Measures Matter."[16] To tailor those frameworks to climate investments, we drew on other related popular and academic literature as well as feedback from interviewees and informants. We offer 10 Equitable Climate Investment Principles (ECIPs) which can serve as guiding principles for use by anyone working to design and implement climate investment programs and projects that center equity.

Community members distributing masks to workers in Oxnard.
PHOTO CREDIT: CENTRAL COAST ALLIANCE UNITED FOR A SUSTAINABLE ECONOMY (CAUSE).

10 EQUITABLE CLIMATE INVESTMENT PRINCIPLES

EQUITY IN THE GOALS

1. Drive with equity from the start, leading with race-conscious solutions that center the most impacted communities.

EQUITY IN PROCESS

2. Center the agency and stated needs of EJ communities, Tribal communities, and other communities (such as Disadvantaged Unincorporated Communities) that have been sacrificed or underserved.
3. Minimize burdens and barriers for priority groups in accessing and utilizing resources.
4. Invest in community organizing, leadership, and capacity building—before, during, and after climate investments are made—to build long-term community power.

EQUITY IN OUTCOMES

5. Produce desired, thoughtfully coordinated, multi-benefit outcomes for communities on the frontlines of the climate crisis.
6. Make reductions in local pollution burden a co-equal goal and outcome to decreasing GHGs.
7. End the use of all fossil fuels without investing in transition strategies that perpetuate harms or cause new harms to EJ communities.
8. Advance health equity outcomes and at minimum, do not create more harm.
9. Build wealth in EJ communities, including through high-road jobs creation, that can help close the racial wealth gap; at minimum, do not perpetuate economic harms or inequities.

EQUITY IN MEASUREMENT, EVALUATION, AND ACCOUNTABILITY

10. Conduct regular equity analyses to ensure transparency and accountability, with a focus on understanding benefits and impacts on communities.

These principles are grounded in the understanding that solutions to addressing climate change must lead with equity to be effective. Research has shown that in places with greater environmental inequality—e.g., disproportionate toxic air pollution by race or place—the *average* pollution levels are also higher across the board.[17] In other words, environmental equity is tied to environmental quality *for everyone*. Starting with equity in our climate solutions is not only essential to advance justice for the communities that have been historically harmed, underserved, and left behind[18] but will, in the process, produce improved conditions for all people.

For our analysis of CCI, we used quantitative and qualitative methods to understand how well CCI is currently performing against the ECIPs described above. For our quantitative analysis, we used CCI project implementation data representing projects implemented as of November 2022, which is publicly accessible through CARB's public Detailed Implemented Projects Dataset.[19] We determined how much funding went to different geographies and different programs, outcomes related to GHG and co-pollutants reductions, and selected other co-benefits. We utilized CalEnviroScreen 4.0 to cross-reference how spending and selected outcomes are realized in DACs.[20] Unless otherwise indicated, all reported data was tabulated by the authors.

We also used qualitative methods, leaning on web research and literature reviews, interviews of statewide EJ leaders for their perspectives on CCI, case studies on 10 CCI programs, and focus groups with EJ leaders in Oxnard, Richmond, and the Eastern Coachella Valley. We conducted roughly 100 interviews and conversations with community and EJ stakeholders. The extended version of this report offers additional detail on both our quantitative and qualitative methods.

KEY FINDINGS ABOUT CCI

- The majority of implemented CCI dollars (73% of the $9.2 billion implemented[21]) are landing in and providing some benefit to Priority Populations—DACs, low-income communities, and low-income households—by being located within these communities and meeting CARB's "benefits" checklist. DACs have received over $4.2 billion (nearly 47% of the $9.2 billion implemented).
- California does not explicitly use a race-conscious approach to delivering climate investments. However, there are statutory requirements around delivering CCI benefits to DACs—which are disproportionately Black and Latinx. Therefore, it is reasonable to infer that CCI programs are implicitly required to, and are indeed, reaching places with higher percentages of people of color.
- Reductions in co-pollutants such as diesel particulate matter (PM), nitrous oxides (NOx), PM2.5, and reactive organic gases (ROG) produced by CCI projects were concentrated in the most pollution-burdened communities (top quartile of CalEnviroscreen scores), although these places had the most pollution to begin with, and therefore, the most potential for reductions.
- Most CCI funding is going towards investment types identified as helpful and desired by interviewed environmental justice advocates and leaders (e.g., transportation, housing, urban greening, air quality, solar, water infrastructure).
- Many interviewees were not aware of the suite of programs supported by CCI. At the local level, many interviewed environmental advocates and leaders were not aware of CCI-funded projects in their communities.
- On the other hand, the "felt impact" of investments—the visibility and perceived usefulness and impact of investments to local people—appears strongest when projects are community-driven and well-coordinated (e.g., programs such as Transformative Climate Communities (TCC) and Affordable Housing and Sustainable Communities (AHSC)).
- Community groups currently do not have the agency to influence some key aspects of CCI, namely determining how funding is appropriated to different programs and pushing back on unwanted projects.
- "Ease of use" differs across programs, but overall, accessing larger grant opportunities (e.g., TCC, AHSC, Forest Health) is still a challenge for under-resourced applicants, particularly smaller community-based organizations.
- Some problematic projects (e.g., dairy methane digesters, alternative fuels) face continuous pushback from EJ communities for perpetuating inequities and claiming benefits without proper accounting of harms.

South LA Eco-Lab Site Visit in 2022.
PHOTO CREDIT: SOUTH LOS ANGELES TRANSIT EMPOWERMENT ZONE (SLATE-Z).

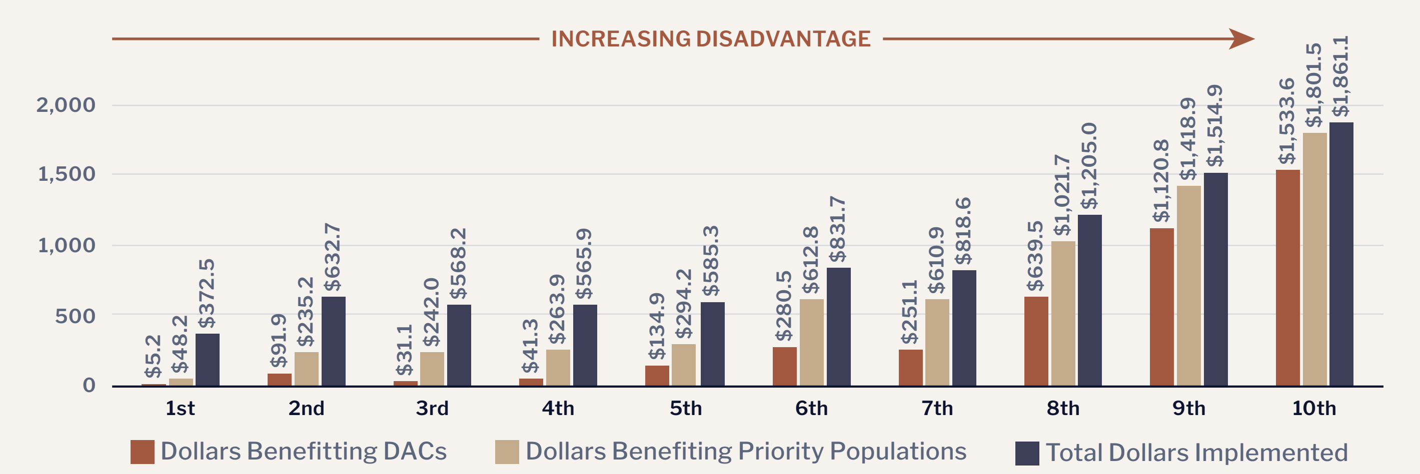
- Tribal Communities require tailored offerings, collaboration, and assistance. There is strong sentiment among EJ groups that Disadvantaged Unincorporated Communities continue to be left behind.
- The CCI Detailed Implemented Project Dataset has areas for improvement; advanced data analysis is required to understand many aspects of the data, as well as cumulative outputs landing in communities.
- Philanthropy has a clear and vital role to play in supporting equitable CCI implementation.
- The ecosystem[22] for climate justice in California has made climate investments more equitable, advancing efforts to improve program design, to create specific programs like TCC, and to secure increased funding for Tribal Nations and Indigenous communities.

DETAILED FINDINGS

By the Numbers: Analysis of CCI Implementation Data

By the numbers, CCI is delivering on equity. Over $6.7 billion (73% of the $9.2 billion implemented[23]) have "benefited Priority Populations"—DACs, low-income communities, and low-income households—by being located within these communities and meeting CARB's "benefits" checklist.[24] Over $4.2 billion (nearly 47%) has gone towards projects located in DACs—the top 25% of environmentally burdened and vulnerable communities in the state[25]—which overall, are disproportionately Black and Latinx.[26] Figure 2 shows where CCI funding is going by CalEnviroScreen 4.0 scores, which represents cumulative impacts in a community from pollution burdens, concentration of sensitive populations, and socioeconomic conditions.[27] Indeed, when we look at the funding, it is strongly weighted towards Disadvantaged Communities that are the most burdened according to CalEnviroScreen 4.0.

Figure 2: GGRF Dollars Implemented (as of November 2022) by CalEnviroScreen 4.0 Deciles ($ in Millions)



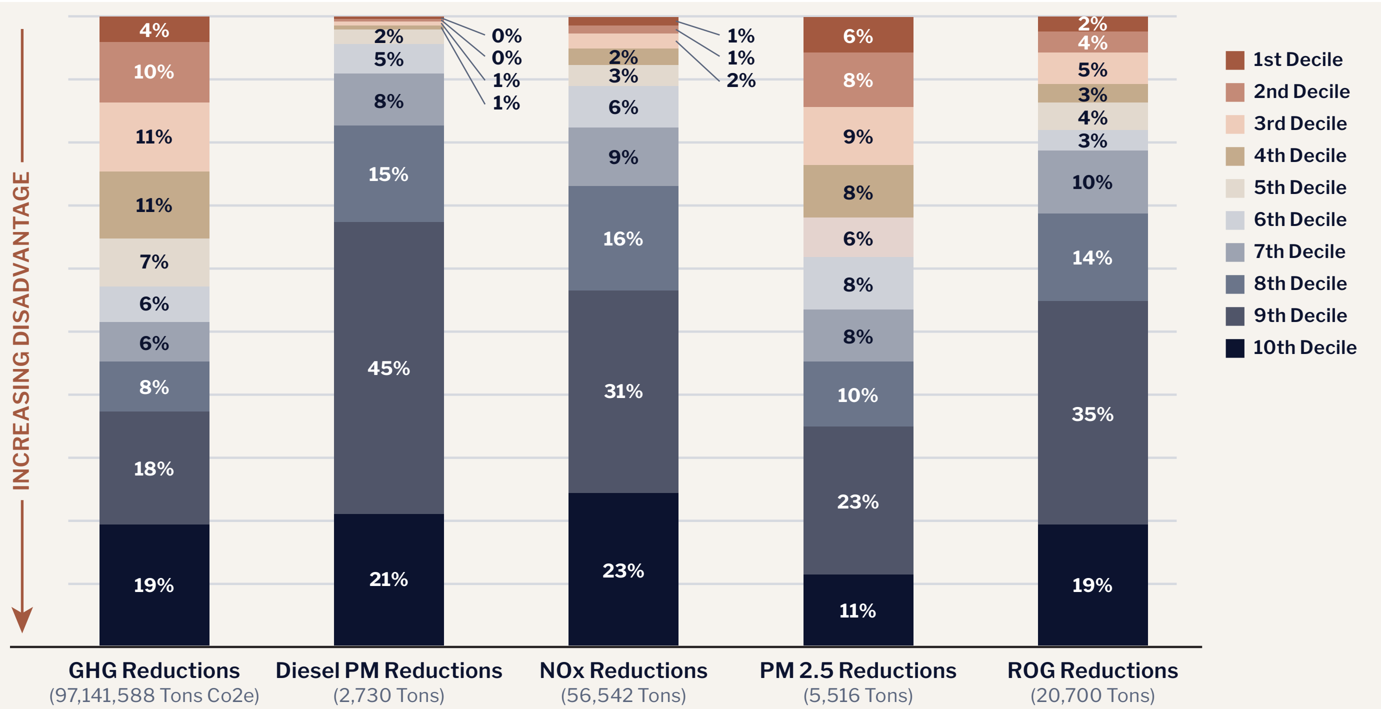
Source: USC Equity Research Institute analysis of California Air Resources Board Detailed Implemented Projects Dataset (Project Data as of November 30, 2022); California Office of Environmental Health Hazard Assessment, "CalEnviroScreen 4.0," October 2021.

Note: Implemented GGRF dollars used in this analysis exclude the High-Speed Rail Project and administrative costs. While "DACs" are generally understood to represent census tracts receiving the top quartile of CalEnviroScreen (CES) scores, they also represent those lacking CES scores but receiving the highest 5 percent of CES cumulative pollution burden scores; those previously identified as DACs in the 2017 designation; and lands under the control of federally recognized Tribes.

When speaking with equity stakeholders about CCI, they stressed the importance of particular geographies. Disadvantaged Unincorporated Communities (DUCs) are areas that often lag behind on infrastructure investments due to histories of systemic racism and disinvestment.[28] According to our analysis, DUCs have received 3% of implemented CCI dollars while they comprise 4% of the state's total population.[29] While this is close to proportionate, their histories suggest and community stakeholders stress that DUCs are still far behind in having local infrastructure and investment needs met. Rural communities often point out that they are systematically overlooked in comparison to the state's major metros. We found they received 25% of implemented CCI dollars[30] while representing less than 6% of the state's population.[31] See sidebar on the next page for the types of programs being funded in rural communities in California, which reflect a mix when it comes to producing equity outcomes (as will be shown in the case studies in the next section of the report). Finally, while the nine-county Bay Area and Los Angeles have received similar amounts of implemented CCI dollars and by some other measures receive close to equal funding, the Bay Area receives more per capita funding in higher (more pollution burdened) CES percentiles.

How have CCI projects performed on reducing GHG and co-pollutant emissions? Figure 3 shows that the biggest reported GHG reductions are in the communities with highest CalEnviroScreen 4.0 scores. This is unsurprising as many of these areas have the highest levels of GHG and co-pollutants to reduce. In addition to GHGs, EJ and climate justice stakeholders are concerned with co-pollutants such as diesel particulate matter (PM), nitrous oxides (NOx), PM2.5, and reactive organic gases (ROG) which directly impact residents' health. Figure 3 shows co-pollutant reduction attributable to CCI projects, by CalEnviroScreen 4.0 scores. The majority of reductions in diesel PM, NOx, and ROG produced by CCI projects are concentrated in the most pollution-burdened communities within the highest quartile of CalEnviroscreen scores. Reductions in PM 2.5 attributable to CCI investments are more evenly spread across communities.

Figure 3: Pollutant Reductions from CCI Investments (as of November 2022) by CalEnviroScreen 4.0 Deciles



Source: USC Equity Research Institute analysis of California Air Resources Board Detailed Implemented Projects Dataset (Project Data as of November 30, 2022); California Office of Environmental Health Hazard Assessment, "CalEnviroScreen 4.0," October 2021.

Note: Implemented GGRF dollars used in this analysis exclude the High-Speed Rail Project and administrative costs. Bars with missing labels have values of less than 1%.

Top 10 CCI Programs in Rural Communities by Percentage of Program Dollars Implemented in Rural Communities

14% Forest Health

11% Transit and Intercity Rail Capital

11% Low Carbon Transit Operations

8% Funding Agricultural Replacement Measures for Emission Reductions

7% Wildfire Prevention Grants

6% Dairy Digester Research and Development

4% Clean Vehicle Rebate

4% Zero-and Near Zero-Emission Freight Facilities

4% Community Air Protection Incentives

3% Sustainable Agricultural Lands Conservation

Note: These calculations exclude administrative costs associated with programs. This list also excludes the High-Speed Rail program.

Source: USC Equity Research Institute (ERI) analysis of the U.S. Census Bureau, "Urban Area Tiger/Line" shapefile, 2020, https://www.census.gov/programs-surveys/geography/guidance/geo-areas/urban-rural.html; USC ERI analysis of California Environmental Protection Agency, "SB 535 Disadvantaged Communities Data," 2022. https://oehha.ca.gov/calenviroscreen/sb535.

Beyond GHG and co-pollutant reductions, in aggregate, CCI has produced other broad benefits as reported in its implementation dataset. These include reductions in vehicle miles traveled across the state (about 71.5 billion miles), jobs supported (about 26,100 full time jobs, 7,300 indirect, and nearly 13,800 induced jobs), as well as estimated health benefits such as avoided hospitalizations for cardiovascular and respiratory illnesses.[32] In terms of equitable job creation, the quality of jobs matter; however, there is no publicly available information on metrics such as wages, benefits provided, local hiring practices, etc. for the jobs supported by CCI.

Beyond the Numbers: Program Case Studies and Dialogues with Communities

While investments may be landing in pollution-burdened communities, not all investments are equally helpful in advancing community priorities nor do they produce the same degree of "felt impact." We provide more context on the *quality* of CCI investments through program case studies and community focus groups described below. Taken together with the quantitative analysis, this multifaceted understanding of CCI can then be run through our ECIP framework to provide a broader equity analysis of the entire initiative.

CASE STUDIES OF 10 CCI PROGRAMS

We selected 10 programs based on a preliminary review of all programs as well as conversations with EJ groups. We sought to select a sample that captures a diversity of sectors, funding scales, program types (grants, allocation, direct funding for agency), and visibility and/or reception among EJ groups. We also sought to include programs that had relevancy for anticipated federal investments types through the federal Inflation Reduction Act (IRA) and the Infrastructure Investment and Jobs Act (IIJA).

This resulted in the selection of programs listed in Table 1. While only representing 10 of CCI's more than 70 programs, this set represents 61% of GGRF dollars allocated to different programs as of November 2022 (including High-Speed Rail). To understand the degree to which equity considerations are integrated into program design, processes, and reflected in outcomes experienced by communities and reinforced by data, we reviewed program guidelines and spoke to relevant stakeholders (e.g., administering agencies, funding recipients, and/or selected EJ advocates). In aggregate, we spoke with approximately 50 stakeholders who are listed at the end of this report.

Although these case studies certainly do not cover all investment types within CCI, they allow us to grapple with in-depth examples of how equity is or is not integrated into selected programs and to provide a snapshot of the dynamics within the CCI initiative at large. Table 1 shows the 10 CCI programs along with the amount of dollars that were allocated to the program for use, and the amount implemented as of November 2022. It also indicates whether the program receives continuous appropriations year-to-year from the legislature. The programs are ordered roughly with the strongest equity performers at the top. Due to the diverse nature of these programs, this ordering is only an approximation.

Table 1. CCI Programs Selected for Case Studies

Program	Dollars allocated as of November 2022 (% of total allocated CCI dollars, excluding High Speed Rail)	Dollars implemented as of November 2022 (% of total implemented CCI dollars, excluding High Speed Rail)	Continuous allocation as share of GGRF appropriations for FY 22-23[33]
Transformative Climate Communities (TCC)	$241.3 M (2%)	$204.9 M (2%)	-
Community Solar Pilot	$2.2 M (~0%)	$2.0 M (~0%)	-
Affordable Housing and Sustainable Communities (AHSC)	$3,276.2 M (21%)	$1,508.6 M (16%)	20% (combined with SALC)
Forest Health	$602.7 M (4%)	$461.2 M (5%)	-
Low Carbon Transit Operations Program (LCTOP)	$943.2 M (6%)	$776.8 M (8%)	5%
Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP)	$486.4 M (3%)	$256.9 M (3%)	-
Community Air Protection Incentives (AB 617)	$1,164.0 M (8%)	$433.3 M (5%)	-
High-Speed Rail	$5,496.5 M	$4,300.0 M*	25%
Sustainable Agricultural Lands Conservation (SALC)	$358.7 M (2%)	$90.2 M (1%)	20% (combined with AHSC)
Dairy Digester Research and Development Program (DDRDP)	$289.1 M (2%) (jointly with the Alternative Manure Management Program)	$195.3 M (2%)	-

* The latest CCI implementation dataset released by CARB does not include data on High-Speed Rail (dollars implemented). As such, this number is derived from the "2023 Annual Report" which was released in April of 2023 (https://ww2.arb.ca.gov/sites/default/files/auction-proceeds/cci_annual_report_2023.pdf).

Transformative Climate Communities (TCC) was lifted up across our project interviews as a strong model for funding comprehensive, community-driven climate projects. Through TCC, California has distributed planning or implementation grants to 30 communities,[34] and for this report, we investigated three of these 30 communities—South Los Angeles, Stockton, and San Diego. We found that TCC's application process ensures applicants engage with community members and trusted organizations to create project proposals that are community-driven.[35] TCC's strengths lie in the program's focus on catalyzing local collaboratives and prioritizing tangible progress on climate, health, and economic development projects. However, the high level of technical knowledge, time, and effort required to apply for and report on these funding opportunities remains a significant challenge. Local philanthropy often plays a critical role filling funding gaps. Despite its excellence, EJ advocates must constantly advocate for TCC to be funded by the legislature—and sometimes do not succeed.

The Community Solar Pilot Program was another success, that is improving access to clean energy for households unable to benefit from existing low-income solar programs. Through the program, California awarded $2.05 million to a project administered by GRID Alternatives Inland Empire in partnership with the Santa Rosa Band of Cahuilla Indians and the Anza Electric Cooperative that built a community solar system on land leased from the Tribal Nation.[36] Since 2021, the funded project has provided reliable energy access, job training opportunities, and lower energy costs to 38 Tribal households and 162 non-Tribal low-income households. Importantly, this effort supported the Tribe's goal towards increased long-term sovereignty through improved energy independence.[37] The project is expected to produce more than 42 million kilowatt-hours of energy over the next 20 years.[38]

Project undergoing completion on Santa Rosa Band of Cahuilla Indians tribal lands in Riverside County.
PHOTO CREDIT: SANTA ROSA BAND OF CAHUILLA INDIANS.

The Affordable Housing and Sustainable Communities (AHSC) program funds affordable housing and transportation. While the application process is onerous, it includes strong equity guidelines and has produced large-scale, multi-faceted projects, including roughly 15,000 new homes for low-income people, in addition to community-wide benefits like street trees, improved sidewalks, transit infrastructure, and free transit passes.[39] The program has pushed developers to increase community engagement and coordination and improve jobs outcomes. However, several community members and developers representing less dense parts of the state have expressed frustration, noting that these regions find it hard to produce the vehicle miles traveled reductions needed to win projects, making funding more difficult to access in these places.

"After consultation with community organizations, TCC expanded program guidelines to include disadvantaged rural and Tribal communities as lead applicants. Even with this recent update, program staff are continuously identifying ways to improve and expand accessibility, reflected in our updates to our guidelines."

— Jerry Rivero
Strategic Growth Council

Controlled burning to support forest management.
PHOTO CREDIT: MID KLAMATH WATERSHED COUNCIL / WESTERN KLAMATH RESTORATION PARTNERSHIP.

The Forest Health Program was established in 2015 to improve resilience against catastrophic wildfire.[40] As of November 2022, it has allocated $602.7 million in funding to 227 landscape management projects.[41] According to our interviews, the program has created collaborative multi-jurisdictional partnerships supported by large-sum, flexible funding to awardees. It has also materially benefited local communities while building collaboration between CAL FIRE and receiving organizations. Forest Health has been a significant touchpoint between CCI and Tribal Nations in terms of restoring some traditional land management practices, despite tensions around other state programs that require Tribal entities to commit to a limited waiver of sovereign immunity in order to utilize public funding. Similar to many larger CCI programs, interviewees identified reporting requirements being technically and administratively onerous. Additionally, no job quality standards are required for the program. Jobs within the fire prevention and forestry sector largely represent "low-road," low-wage, often perilous jobs, signaling opportunities for stronger workforce requirements in public programs to produce higher quality job opportunities.[42]

The Low-Carbon Transit Operation Program (LCTOP) provides funding to transportation agencies to implement operations or capital projects. The program is guaranteed year-to-year funding from the GGRF (5% appropriation), ensuring reliability. LCTOP is notably easy to use. Dollars are made available on an allocation basis instead of through a competitive process and funding is provided up-front instead of via reimbursement. For any transit agencies whose service area includes a DAC, at least 50% of received LCTOP funds must benefit its DACs.[43] As of November 2022, the vast majority of LCTOP funding (96%) benefits DACs. While LCTOP has improved transit in DACs, there have been concerns that this rare source of funding available for *transit operations* is being diverted towards EV fleet purchases for which there is much more available funding as transit agencies respond to aggressive mandates to transition to zero-emissions vehicles.[44]

Former Los Angeles Mayor Eric Garcetti announcing a pilot program in 2019, providing free, unlimited DASH bus passes for Los Angeles students.
PHOTO CREDIT: MOVE LA.

The Hybrid Voucher Incentive Program (HVIP) focuses on transitioning fleets like trucks and buses across the state to cleaner vehicles. Between 2010 and April of 2022, "HVIP has supported the purchase of over 6,000 zero-emission trucks and buses, 2,500 hybrid trucks, 2,400 natural gas engines, and 290 trucks outfitted with electric power take-off."[45] While it did not start with extensive equity goals, the program funding structure has shifted over time to ensure small fleets and publicly owned fleets can benefit from the program as much as larger private fleets, and that funding prioritizes vehicles domiciled in DACs. Currently, it is estimated that over 60% of HVIP funding has benefited priority communities by locating clean vehicles in DAC or low-income communities. In 2022, 41% of all vouchers were given to public or small fleets.[46]

The Community Air Protection Incentives Program (CAP Incentives) was created to support air pollution reduction activities in communities with some of the most concentrated levels of pollution throughout the state—as identified in AB 617 and also known as AB 617 communities.[47] When it comes to centering community priorities and having community members drive decision-making on how incentive dollars are spent, we found mixed experiences. The first two years of the CAP Incentives program funding was spent on vehicle and equipment replacement activities[48] without notable community input. For more recent program years, we heard of positive experiences with participatory budgeting exercises conducted between air districts and local Community Steering Committees. Supporting more activities like this, integrating more clear procedural equity metrics into the program, and ensuring that funding is not used for fossil fuel infrastructure or delivered to oil and gas companies are areas for further improvement.

The High-Speed Rail Project has often been overlooked in analyses of CCI because it is so large and still in development. It aims to be the nation's first fully electric high-speed rail system and will connect communities across the state.[49] While it is behind schedule and faces escalating costs, HSR has set important workforce and small business goals and produced impressive job outcomes, while building a reputation for addressing community input.[50] Due to its size, we largely focus on HSR activities and impacts in Fresno. Most of our interviewees within Fresno except one were supportive of HSR. However, when it comes to the project's use of GGRF dollars, we heard critiques from stakeholders within and outside Fresno related to HSR receiving significant and continuous funding from the GGRF (25%) at the expense of other programs that could provide more immediate, tangible benefits.[51] Outside of Fresno, EJ concerns have also arisen—for instance, an intermodal freight transportation facility that may be built in Colton (which is mostly comprised of DAC census tracts) to allow HSR to use a more desirable route. Environmental advocacy groups and residents fear this may lead to increased diesel pollution.[52] The HSR Authority is currently investigating alternatives to the facility in response.[53]

The Sustainable Agricultural Lands Conservation (SALC) Program enables agricultural land owners to enter legal agreements (conservation easements) that protect lands from development in perpetuity. The program also provides funding for technical assistance and planning grants. Through more than eight rounds of funding, 194,000 acres of agricultural land in the state has entered into these trust agreements.[54] The program has made notable efforts to expand eligibility and funding opportunities for Socially Disadvantaged Farmers and Tribal communities. However, few funds from the program have ultimately benefited Priority Populations in direct and meaningful ways—around 5% as of November 2022.[55] For the December 2021 through November 2022 reporting period, the reported value was 0%.[56] While the conservation of natural and working lands are important endeavors for creating long-term climate benefits—and are often very "cost-effective" per unit of GHG emissions reduced or averted—there could be deeper commitments and requirements to benefit Priority Populations in tandem in future rounds.

A dairy operation in Shafter, California.
PHOTO CREDIT: ASSOCIATION OF IRRITATED RESIDENTS (AIR).

The Dairy Digester Research and Development Program (DDRDP) funds the development of dairy digester technologies which captures methane from large manure lagoons and converts it to biogas. This material can be used as transportation fuel or to generate electricity. Since 2015, DDRDP has funded over 130 dairy digester projects, primarily located in the Central Valley.[57] For many years, the program has faced opposition from EJ organizations and local residents. These groups have called out digester technologies as investments that entrench and perpetuate unhealthy livestock management practices which in turn, produce concentrated and unequal burdens in places—air pollution and malodors, extensive water use, and potential water pollution. [58] While DDRDP guidelines require projects to demonstrate they will not produce new harms, there is still ongoing community pushback against the program for its potentially misleading GHG accounting approaches [59] as well as the perception that despite being identified as "benefiting Priority Populations," these CCI-funded investments have produced little tangible benefits for local residents. [60]

FROM OUR 10 CASE STUDY ANALYSES, WE OFFER THE FOLLOWING KEY TAKEAWAYS:

- **The majority of case study programs we reviewed produce verifiable, helpful benefits to Priority Populations, including unintended benefits such as improved collaboration between local agencies, community based organizations (CBOs), and/or environmental justice groups.** In particular, the more complex large-dollar programs such as TCC, AHSC, and Forest Health have produced well-coordinated, multi-benefit outcomes, and visible community-wide impact. These three programs have also produced partnership structures that continue to yield fruits through new project ideas or continued collaboration beyond the initial investment.
- **Some programs have mixed results.** While the High-Speed Rail Project has produced impressive jobs outcomes and built a reputation for addressing community input, it faces criticism from some EJ advocates for receiving significant and continuous funding from the GGRF (25%) at the expense of other programs that could provide more immediate, tangible benefits. The Community Air Protection (CAP) Incentives program centers some of the most pollution-burdened parts of the state (AB 617 communities) with air pollution reduction projects and has made recent progress on activities like participatory budgeting; but it has received mixed feedback from community participants thus far and has, in limited instances, awarded funding to oil and gas companies.
- **Some programs may contribute to harm or show very few benefits to communities.** The Dairy Digester Research and Development Program (DDRDP) has faced opposition from EJ organizations and local residents for many years, who have called out dairy digester technologies as investments that entrench and perpetuate unhealthy livestock management practices which produce concentrated and unequal burdens in the Central Valley. SALC, which funds the purchase of conservation easements, largely benefits landowners with commensurately little tangible, near-term benefits for surrounding communities.
- **CCI programs range vastly in their ease of use and accessibility.** On one end of the spectrum, LCTOP, HVIP, and the Community Solar Pilot Program shined for their ease of use. More complex programs (e.g., TCC, AHSC, Forest Health) involve extensive and onerous application materials, and in many cases, have required users to hire professional support to pull together a strong application. Technical assistance provided by programs was cited as being helpful, though not always robust or sufficient.
- **CCI programs need more work to improve economic benefits.** We found that while job creation is generally emphasized in these investments, there is no broader conceptual framework or objectives towards wealth building for low-income households or contributing to community wealth building (e.g., supporting democratic ownership models like community land trusts). When it comes to the issue of potential gentrification and displacement that may stem from climate investments, programs addressed this inconsistently, with some (e.g., AHSC, TCC) requiring explicit anti-displacement activities as part of funding applications while others do not include any (e.g., LCTOP, High Speed Rail). There is also little reporting around the financial recipients of investments (e.g., households, companies, CBOs, local governments); and jobs quality data is not publicly available.
- **Across programs, we found efforts by administrators to deliver more funding opportunities to Indigenous communities.** However, significant barriers continue to exist for Indigenous communities to access programs and benefit from programs that were not explicitly designed with their needs and perspectives in mind.

DIALOGUES WITH COMMUNITIES: UNDERSTANDING FELT IMPACTS IN THREE PLACES

By design, CCI investments are intended to benefit the communities with greatest needs. To assess the success of this aim, it is critical to understand whether or not residents and local climate justice organizations are aware of and feel these benefits. To understand the impacts of CCI programs on the communities they intend to reach, we conducted community focus groups in the Eastern Coachella Valley, Oxnard, and Richmond, which were identified for their diverse geographies, population, environmental challenges, and EJ ecosystems. In aggregate, these communities have received over $140 million of CCI funding to address a variety of environmental challenges.
In each location, we spoke with stakeholders and presented an overview of how CCI works, shared data on CCI funding in their respective areas, and solicited community perspectives on CCI impacts. (See interviewee list at the end of the report.)

Líderes Campesinas distributing masks to farmworkers in the Eastern Coachella Valley.
PHOTO CREDIT: LÍDERES CAMPESINAS.

The Eastern Coachella Valley (ECV) in southeastern California is home to a population that is 84% people of color—most of whom are Latinx or Indigenous, with a significant immigrant community.[61] These communities face a multitude of environmental injustices including exposure to toxic dusts from the lakebed of the receding Salton Sea; the liberal use of agricultural pesticides; a high concentration of dump sites; and disinvestment from basic environmental infrastructure.[62] Much of the CCI funding directed to the ECV has gone to entrenched regional power holders like the agriculture industry and cities, instead of Tribal communities and Disadvantaged Unincorporated Communities, and other communities with lower capacity to implement needed programs. Overall, interviewed stakeholders expressed that their communities did not feel the benefits of CCI funding and their desires were not adequately considered in funding allocations, contributing to a skeptical view of CCI's impact on the ECV so far.

Community activists and organizers with Californians for Pesticide Reform demanding notice of nearby hazardous pesticide use.
PHOTO CREDIT: CALIFORNIANS FOR PESTICIDE REFORM.

Oxnard, a city on the Central Coast just south of Santa Barbara, has long struggled with environmental challenges including a 43-acre toxic industrial site pending clean-up, pesticide exposure, and fossil fuel extraction.[63] When we presented the investments to Oxnard environmental justice stakeholders, they were surprised by the number of investments about which they had limited or no knowledge. For those that were aware of the investments, they noted that it appeared investments were going to prominent issues in Oxnard such as transit needs. However, they also shared that short-term funding investments that are not tied to a larger arc of work cannot change systemic challenges in Oxnard. Additionally, pesticide exposure was stated to be particularly important to the community, yet wholly unaddressed by CCI. The group reflected on the missed opportunity to capture more of these funds if they were involved in greater collaboration and more CCI community engagement in Oxnard.

Richmond, a city in the East Bay of the San Francisco Bay Area, is a historically Black community, though now more diverse, with an industrial past that has seen opportunities in boom times and neglect in bust times.[64] One constant has been the refinery now owned by Chevron that emits dangerous pollutants and has long had a disproportionate voice in municipal politics.[65] Against this backdrop, $39 million in CCI dollars have been invested in Richmond. About $8.1 million went to urban greening projects, $6.2 million to low carbon transportation projects, and $5 million towards an 80-unit very low-income affordable housing project for seniors, among other investments. With the exception of greening investments and $35 million for a recently awarded, though not yet implemented, TCC grant,[66] most of the investments were not known by EJ stakeholders. They would like to see Richmond liberated from racial oppression, broadly, and more specifically to see dollars to help them with land remediation to enable affordable housing projects, more transit projects, in-language education, and funding to help them develop a vision for a post-Chevron Richmond.

> ***"I didn't know that that was actually happening, in part because the impact is not there."***
>
> — Katt Ramos
> Richmond Our Power Coalition

THESE COMMUNITY CONVERSATIONS LIFTED UP THE FOLLOWING THEMES:

- Community members living under the burden of environmental racism want to be heard and have more agency in the CCI process, as has been the case with TCC.
- While CCI funding has started to address some community priorities in these regions—like greening, affordable housing development, and transit infrastructure—it has not been able to address major community concerns around pesticides, land remediation, local infrastructure, etc.
- While CCI investments can help, these communities are fighting histories of systemic injustices and power imbalances—like with Chevron in Richmond and the agricultural industry in Oxnard and the Eastern Coachella Valley—and addressing this history will require greater levels of investment in their organizations as well as climate justice projects in their communities.

Perhaps most striking, while there have been significant CCI dollars invested in these regions, environmental and climate justice organizations reported they were largely unaware of where funds were being directed and the impact of funds on community members' lived experiences. This is a particular problem because—as we were reminded in these conversations—EJ communities see CCI as connected to cap-and-trade, a program they reject. As such, these dollars are held to a high standard when it comes to their equity impacts. They are frustrated with decades of disinvestment and environmental hazards and for them, CCI investments alone are not enough to counter those trends.

Broadly speaking, the communities we surveyed expressed desires for more agency in CCI funding decisions, and more CCI dollars for stated priorities in their respective regions. By addressing these needs, California can raise the profile of these investments and increase community ownership of CCI and its programs.

MAKING THE MARK ON EQUITY? AN ANALYSIS OF CCI

To conduct an equity-focused analysis of the CCI, we use our ECIPs to analyze the breadth of data collected. While most of the analysis in this section focuses on the actions of public agencies implementing CCI, we also consider the role of non-governmental actors like philanthropy where appropriate, to support equity implementation in the state. Across the 10 ECIPs, there are areas where CCI programs perform well, but overall there is room for improvement. Fortunately, CARB staff have shared their openness to achieving this, particularly around evaluation, measurement, and accountability.

EQUITY IN THE GOALS

1. **PRINCIPLE: Drive with equity from the start, leading with race-conscious solutions that center the most impacted communities.**

   - **FINDINGS:** Although stakeholders spoke of conflicts with using CCI dollars given that they are sourced from cap-and-trade auctions, the initiative is guided by clear equity goals through SB 535 and AB 1550, setting aside 35% of funding to Priority Populations.[67] CARB can assist administering agencies towards collectively meeting this goal, but it does not have a binding commitment to race-conscious solutions due to concerns around Prop 209.[68] While the logic of avoiding legal tangles is clear, it is also clear from the research that race is a more accurate predictor than income in determining environmental disparities.[69] The state has taken indirect approaches to get around this: CalEnviroScreen (CES) defines disadvantaged communities or DACs, which are a major component of Priority Populations, and to some extent funnels more funding to communities of color, as a result.[70] CARB has developed a "Vision for Environmental Justice and Racial Equity," but this is not an action plan with clear ties to CCI.[71]

EQUITY IN PROCESS

2. **PRINCIPLE: Center the agency and stated needs of EJ communities, Tribal communities, and other communities (such as Disadvantaged Unincorporated Communities) that have been sacrificed or underserved.**

   - **FINDINGS:** Community groups want more opportunities to directly identify needed climate investments, access resources accordingly, and be able to shape CCI to meet their needs. We found that CCI includes well-intentioned efforts to allow for community participation in parts of the initiative (e.g., allowing public input on guidelines for selected programs and the initiative at-large). However, communities are given little agency over CCI overall. One reason is the fragmented nature of CCI's programs which makes it difficult for communities to cohesively leverage funding towards a community-identified vision, with a notable exception being the TCC program.[72] Another reason is the inability for communities to influence key processes such as funding appropriation and allocation. A third is they cannot veto unwanted and potentially harmful projects. Continuing to improve engagement with California Tribal Nations and Indigenous communities and addressing the specific needs of DUCs are other areas for improvement.

Wildfire and Smoke Experiences Project focus group meeting in Mecca, California.

PHOTO CREDIT: COMMUNITIES FOR A NEW CALIFORNIA EDUCATION FUND.

3. **PRINCIPLE: Minimize burdens and barriers for priority groups in accessing and utilizing resources.**

   - **FINDINGS:** The burdens and barriers to utilizing CCI resources largely differ across the 70-plus programs. Ease of use and accessibility vary considerably, particularly for under-resourced applicants (e.g., smaller CBOs, local governments, and smaller businesses). Helpful ways of lowering burdens may include using an allocation basis instead of a competitive basis to disburse resources (i.e., LCTOP[73]); centering "ease of use" as a key program aspiration (i.e., HVIP program[74]); and eliminating paperwork burdens to the extent possible. Having an organization with technical expertise (e.g., GRID Alternatives) lead the application for the Community Solar Pilot program and manage the majority of paperwork and reporting requirements in close partnership with the recipient community (e.g., Santa Rosa Band of Cahuilla Indians) appeared successful. Large-scale projects such as the Forest Health, AHSC, and TCC programs require extensive application materials, partnership development, and have often required users to hire external support to draft applications. Technical assistance (TA) provided by CCI programs has helped tremendously in making it possible for under-resourced groups to access such complex, big dollar programs.

4. **PRINCIPLE: Invest in community organizing, leadership, and capacity building—before, during, and after climate investments are made—to build long-term community power.**

   - **FINDINGS:** Program design and effectiveness are important but so is community pressure and community capacity. Even before funds were appropriated, allocated, awarded, or implemented, equity organizers pushed for community investment from cap-and-trade and have shaped specific programs. For example: the Sustainable Transportation Equity Project (STEP) was deeply shaped by community input, engagement that was only possible because of existing community capacity.[75] During implementation, stakeholders spoke of the need for robust organizations that have considerable in-house capacity, the ability to work well with specialized partners, and/or the ability to access TA. Since 2015, the California Legislature has appropriated millions of dollars for TA opportunities such as planning, pre-

> ***"There's this whole range of things that need to happen to get moved from the 'idea' phase to the 'ready to apply for funding' phase."***
>
> — Zach Lou
> California Green New Deal Coalition

development, community engagement training, grant application support, and more.[76] With programs like TCC, funds are designed to encourage specialized partnerships—though considerably more funding is needed, as organizations rely on philanthropy or work unfunded. It is a credit to California's EJ ecosystem that CCI is as strong as it is, and philanthropy and others will need to continue to resource it so future climate investments are equitable.

EQUITY IN OUTCOMES

5. **PRINCIPLE: Produce desired, thoughtfully coordinated, multi-benefit outcomes for communities on the frontlines of the climate crisis.**

   - **FINDINGS:** The majority of CCI funding implemented to date has gone towards investment types that are desired by the EJ and CBO stakeholders we spoke with. For example: affordable housing, public transit, electric vehicles, solar energy, weatherization, air quality improvement projects, water infrastructure improvements, and more. Many CCI projects also create benefits that go beyond originally intended program goals—for instance, supplementary local infrastructure improvements (e.g., High-Speed Rail) and lasting collaborations between stakeholders (e.g., TCC, AHSC, and Forest Health). Programs that are an exception include the Dairy Digester Research and Development Program (DDRDP) as well as biogas projects funded through programs like the Low-Carbon Fuel Production Program which have seen pushback from local community members. The work of defining and tabulating "benefits'' across such a wide array of climate investments is a challenging task.[77] While CARB's current approach is commendable, we found opportunities for improvements—in particular, streamlining the total number of and ways in which "benefits" can be claimed and identifying and addressing any externalities, harms, or risks before a benefit can be claimed.

6. **PRINCIPLE: Make reductions in local pollution burden a co-equal goal and outcome to decreasing GHGs.**

   - **FINDINGS:** Decreasing pollution burden is not a co-equal goal to GHG reduction in CCI, although the initiative does state that it is desired and identifies air pollution reduction as a co-benefit.[78] CCI has resulted in considerable co-pollutant reductions, as identified in the "By the Numbers" section of this report. While CCI funds air monitoring as well as air pollutant reduction measures through initiatives like the AB 617 Community Air Protection Program, interviewees want greater, more visible, and timely reductions in toxic emissions.[79] Others noted that promises around transportation electrification—one of the main mechanisms through which CCI offers air quality improvements—are like "dangling a carrot" because the technology is not moving fast enough to produce felt benefits, especially as the logistics industry booms. Water was not a dedicated focus of this research, and data was scant, but we do know that water infrastructure is critically needed in DUCs and that newer programs like Safe and Affordable Drinking Water Fund (SAFER) do have strong equity goals.[80] For soil, we heard concerns about the Healthy Soils program which curbs emissions from the agricultural sector but could do more to concurrently address hazardous pesticide use.[81] We also heard the desire for funding to support land remediation

> ***"A fundamental piece is how the law is structured because the law is about greenhouse gases. It is silent on co-pollutants."***
>
> **— Rachel Morello-Frosch**
> **UC Berkeley**
> **Environmental Health Scientist**

which is needed before other investments (e.g., transit-oriented housing development, urban greening) can happen in heavily polluted communities.

Advocates protesting against a proposed gas plant for Oxnard on the steps of the California Public Utilities Commission in December 2015.
PHOTO CREDIT: CENTRAL COAST ALLIANCE UNITED FOR A SUSTAINABLE ECONOMY.

7. **PRINCIPLE: End the use of all fossil fuels without investing in transition strategies that perpetuate harms or cause new harms to EJ communities.**

   - **FINDINGS:** While the purpose of CCI is to fund programs and projects that reduce GHG emissions, there is no explicit requirement that it veer away from funding fossil fuel projects or energy transition strategies that may be equally harmful.[82] CCI has funded projects that are described as "renewable" and "clean" but pose concerns to EJ communities–in particular, methane digester infrastructure, natural gas fueling infrastructure, and hydrogen fueling infrastructure. In aggregate, we believe these projects represent a minority of CCI investments. However, these types of projects should be avoided in future investments, or in the case of hydrogen fuel and infrastructure—an actively evolving technology—supported only if projects demonstrate no potential to cause harm to EJ communities. Because we were not able to trace every single CCI investment and due to murky CCI project data, there may be other instances of "false solutions" or energy projects that are going unnoticed and threaten to extend the life of fossil fuel infrastructure in the state. The transition to a clean energy future also has the potential to produce new harms related to mineral mining. CCI programs include those that fund the electrification of transportation which is contributing to the large and growing demand for rare minerals, particularly lithium. Minerals can be mined in ways that have massive environmental and human costs, domestically and abroad. CCI currently has no guidance to steer away from harmful mining practices.

8. **PRINCIPLE: Advance health equity outcomes and at minimum, do not create more harm.**

   - **FINDINGS:** CCI's main mandate focuses on GHG reduction instead of health benefits, but the initiative does encourage grantees to promote health as a co-benefit.[83] CARB does report on avoided heart- and lung-related deaths, hospitalizations, and emergency room visits as well as reductions in co-pollutants.[84] Given the racialized impact of air pollution, in particular, it would be helpful to assess this data by race/ethnicity to better understand equity outcomes.[85] While many CCI programs should hypothetically yield health benefits (e.g., funding active transportation programs, urban greening, safe and affordable drinking water fund), their true impact is difficult to know. In addition, CCI currently does not have a strong focus on pesticide abatement. Californians for Pesticide Reform and Pesticide Action Network have identified health harms of pesticide use on agricultural workers as well as how pesticide use is a direct climate concern that should be addressed by CCI investments.[86]

9. **PRINCIPLE: Build wealth in EJ communities, including through high-road jobs creation, that can help close the racial wealth gap; at minimum, do not perpetuate economic harms or inequities.**

   - **FINDINGS:** One of CCI's major goals is to produce economic co-benefits with a primary emphasis on job creation.[87] CCI has funded some important just transition jobs programs such as the High Road Training Partnerships program and the Inclusive, Diverse, Equitable, Accessible, and Local (IDEAL) Zero-Emission Vehicle (ZEV) Workforce Pilot. Labor and environmental groups have been able to push selected CCI programs to strengthen their jobs component through legislation like AB 794[88] and AB 680.[89] While job creation is happening through CCI (modeled estimate of 75,000 jobs over the course of the initiative), ultimately, the lack of public data on jobs *quality* limits our ability to fully understand these outcomes. And beyond jobs creation, currently available public data does not allow us to determine who CCI's economic benefits are primarily reaching—e.g., number and types of businesses, local governments, homeowners, or renters. The issue of potential gentrification and displacement is unevenly addressed across the initiative. A small portion of funding has gone towards the practice of paying incarcerated firefighters well below minimum wage through the Wildfire Prevention Grants Program.[90] Overall, within CCI, there is no explicit emphasis on wealth building, community wealth building, or closing the racial wealth gap. There is more work that could be done to address all of these aspects and to incorporate more high-road jobs requirements into all possible CCI funding opportunities.

EQUITY IN MEASUREMENT, EVALUATION, AND ACCOUNTABILITY

10. PRINCIPLE: Conduct regular equity analyses to ensure transparency and accountability, with a focus on understanding benefits and impacts on communities.

- **FINDINGS:** CARB works with administering agencies to conduct extensive data tracking. It reports on CCI program outputs (e.g., GHG emission reductions, co-benefits) and assesses whether benefits are landing in Priority Populations as mandated by SB 535 and AB 1550. This work of collecting streamlined data across 70-plus programs and 20-plus administering agencies is commendable and can be built upon. Chief among updates should be attempting to understand the "felt impact" of investments in communities as many were not aware of CCI investments being made in their communities nor of funding opportunities. Neighborhood-scale presentations of CCI outputs and co-benefits could be a helpful step. Continued improvement of metrics that allow for deeper equity analyses would also be helpful (i.e., funding recipient-type data with demographic information including race/ethnicity; jobs quality data; procedural equity metrics associated with funded projects). Lastly, there needs to be accountability to ensure that local residents can have the final say on any undesired investments.

Wildfire and Smoke Experiences Project to engage a focus group at the Mecca Community Center.
PHOTO CREDIT: COMMUNITIES FOR A NEW CALIFORNIA EDUCATION FUND.

LESSONS FOR FUTURE CLIMATE INVESTMENTS

As federal agencies and the White House Council on Environmental Quality (CEQ) continue to implement the J40 initiative, and states across the country continue to fund climate investments, this research and that of others[91] can be used to shine a light on what strategies work towards advancing equity, and pitfalls to avoid based on California's experiences. Below, we offer 10 broad lessons for stakeholders creating and implementing similar investments. Detailed recommendations for the California Legislature, CARB, the White House CEQ, and philanthropy can be found in Appendix A.

1. Equity goals matter *and* must be paired with clear requirements, trackability, and accountability to yield measurable results.
2. Climate investments produce the most visible, felt impacts when projects are community-driven or have significant community buy-in and involvement.
3. Climate investments are not neutral. Harmful investments—particularly those that perpetuate fossil fuel infrastructure, false solutions, worsen local pollution, or create harms globally—must be identified and corrected, or defunded.
4. For equity outcomes, community and EJ groups must have structural influence over climate investments that go beyond engagement (e.g., determining what types of programs are funded, pushing back on unwanted projects).
5. Ongoing support from the state and philanthropy is needed to ensure communities can easily access and utilize public climate dollars, and build longer term capacity. In particular, defragmenting programs, streamlining and reducing administrative barriers, and providing ample technical assistance should be priorities.
6. Tribal Nations and Indigenous communities relate to climate investments in their own ways—and investments must tailor support to respect the unique context of these communities.
7. The ecosystem for climate justice has and will continue to make climate investments more equitable and impactful for communities through power-building, advocacy, community engagement, and project implementation.
8. Complete data that incorporates community knowledge alongside quantitative statistics is essential for determining and tracking equity outcomes.
9. The next evolution of climate investment programs can build on previous improvements by producing deeper economic benefits including high-road jobs, supporting community wealth building, and building long-term capacity and power.
10. In many places, including California, the immense scale of need in pollution-burdened communities likely requires deeper, more reliable funding towards climate justice solutions, including philanthropic investments.

CONCLUSION: A CALL TO INVEST IN COMMUNITY POWER

2020 May Day march to advocate for rent control and workers' rights for farm workers and labor workers in the City of Oxnard.
PHOTO CREDIT: FUTURE LEADERS NOW.

What we see from California is that we cannot simply fund climate projects that reduce GHG emissions and consider this a job well done. For climate investments to have visible and felt impacts, and address the inequitable impacts of decades of community disinvestment, they must be community-driven. They must center the communities that have been historically marginalized—formerly redlined and currently pollution-burdened, low-income, Indigenous, communities of color—by ensuring dollars go towards local organizations working with residents, holding a vision for their communities, identifying solutions, implementing projects, and keeping this work going long-term. Climate investments from the public sector must be shaped and offered accordingly. Philanthropy must continue to be an active partner to fill gaps towards this broader goal.

We also know that climate and environmental justice ecosystems, centered around CBOs that organize residents,[92] build the power to make investments more equitable: pushing for initiatives like J40 to secure resources for the places with greatest needs; shaping program guidelines to ensure racial justice, labor, and health equity are integrated; pushing back against harmful investments and false solutions; conducting external evaluations to keep public agencies and funders accountable, and more. This "ecosystem" has contributed to CCI's equity outcomes, and such power building is required to reverse decades of disinvestment and harm in frontline communities. As seen in Figure 4, this ecosystem requires the skills and capacities of many organizations but must be centered around organizing and base-building. We must continue supporting these efforts which improve the quality and outcomes of public climate dollars. Philanthropy can play an important role here through long-term, flexible, and patient funding that allows for leadership development, skills-building, and sustained capacity to do this work.

While the impacts of climate change are visible daily and our actions must be swift and strategic, we must simultaneously work to address the outcomes of racialized disinvestment and harm over centuries. Public dollars to address climate change must be leveraged to support the arc towards justice—to build community power which will serve as the vanguard and most precious resource towards charting a just and liveable future.

Figure 4: Schematic of the Power-Building Ecosystem

Source: "California Health and Justice for All Power-Building Landscape: A Preliminary Assessment" by USC Program for Environmental and Regional Equity (now USC Equity Research Institute), October 2018. Since publication of this "power flower" the authors have chosen to add a "Healing Justice" petal.

APPENDICES

Appendix A. Detailed Recommendations

From the broader equity analysis, we provide tailored recommendations for key stakeholders crucial to the success of CCI implementation and future climate investments on a national scale. Our recommendations encompass the California Legislature, which holds the authority to allocate funding from the Greenhouse Gas Reduction Fund (GGRF) and shape CCI through legislation, as well as the California Air Resources Board (CARB). We also extend our insights to the Biden Administration and the White House Council on Environmental Quality (CEQ), aiming to share valuable lessons derived from California's experience to assist federal actors in the implementation of J40.

In addition, recognizing the subtle yet vital role played by philanthropy in supporting equitable climate investments and the environmental and climate justice ecosystem, we offer recommendations for continued philanthropic engagement and resource allocation, both within and outside of public funding.

RECOMMENDATIONS FOR THE CALIFORNIA LEGISLATURE

1. Create a new funding source exclusively available for use by EJ communities, Disadvantaged Unincorporated Communities (DUCs), and Tribal communities to flexibly address community-identified needs that fall outside the primary scope of CCI goals (e.g., soil remediation, infrastructure, community health, affordable housing development irrelevant to GHG emissions potential).
2. Make GHG reduction and local co-pollutant reduction co-equal goals for CCI.
3. Commit to reliably funding the strongest climate justice programs— in particular, TCC with ample technical assistance funds. As appropriate, consider revisiting and revising the list of programs that receive continuous appropriations from the GGRF year-to-year.
4. Ban the use of GGRF dollars to fund fossil fuel infrastructure and inequitable transition strategies which would apply to dairy digesters for biogas production, natural gas infrastructure, and selected hydrogen projects.
5. Create a community oversight committee to oversee CCI implementation and weigh in on key aspects (e.g., funding appropriations decisions, development of Investment Plans, Funding Guidelines updates, procedural equity, and reporting and accountability around outcomes—including jobs, environmental, and health benefit outcomes).
6. Ban state agencies from requiring waivers of sovereign immunity from Tribal Nations as a requisite for accessing CCI funding.
7. Commission a working group composed of relevant state agencies, subject matter experts, and EJ advocates to identify concrete strategies the state can undertake to minimize adverse impacts from domestic and global mineral mining which are being accelerated as a response to California's clean energy transition goals.
8. Allow selected CCI programs to fund work upfront instead of through reimbursement to expand program accessibility for under-resourced organizations, particularly nonprofits.
9. Require the Office of Environmental Health Hazard Assessment (OEHHA) to determine whether the environmental, health, and economic conditions which represent components of the CalEnviroScreen score are measurably improving in DACs with each subsequent update of CalEnviroScreen. If GHG co-pollutants are disproportionately increasing in places, task CARB with assessing the role and possible shortcomings of the current cap-and-trade mechanism in contributing to disparate geographic outcomes, and identifying avenues to address these.
10. Create set-asides for programs created by the Inflation Reduction Act (IRA) and the Infrastructure Investment and Jobs Act (IIJA) and future federal climate funding allocations to California to ensure funds land in and benefit priority communities (i.e., those at the frontlines of the climate crisis, low-income, majority POC communities) in California.

RECOMMENDATIONS FOR THE CALIFORNIA AIR RESOURCES BOARD (CARB), WHICH ARE EXPANDED UPON IN THE LONG VERSION OF THIS REPORT

1. Provide CCI funded users with well-organized, up-to-date, sortable information on opportunities and timelines via CCI websites and calendars.
2. Continuously improve CCI reporting and communications, with a focus on communicating outcomes to EJ groups and CBOs on the ground. Improve neighborhood-scale implemented project mapping, data on benefits to Priority Populations, data on funding recipient sector and/or demographics, data on jobs quality, and data on successful CCI-related community benefits agreements or labor agreements.
3. In Funding Guidelines, provide more clarity on how the condition “maximize…where applicable and to the extent feasible” can be met by programs for economic, environmental, and public health co-benefits.
4. Work with the California Labor and Workforce Development Agency to facilitate a transparent process that allows for labor movement advocates’ feedback on the proposed approach to implementing AB 680.[93]
5. Streamline and update benefits criteria tables to reduce the number of possible benefit types and ensure that awarded projects can still claim that benefits to a community or household still significantly outweigh any potential harms, which must also be named.
6. Coordinate with all other state agencies working on Tribal support activities (e.g., SGC, CEC, OPR) to collect and coordinate feedback received on Tribal needs and customize program delivery to Tribes.
7. Proactively foster dialogue with the Bureau of Indian Affairs (BIA), as many California tribes reside on trust lands associated with the BIA and future projects utilizing GGRF dollars may require close coordination with this federal agency.
8. Host a discussion between program administrators of selected agriculture CCI programs (e.g., Healthy Soils) and staff from the Department of Pesticide Regulation to identify opportunities to integrate pesticide reduction efforts as a co-benefit into existing program guidelines and relevant metrics that could be tracked.
9. On a regular basis, coordinate with state agencies (e.g., SGC) that are working to center DUCs in existing funding programs to identify opportunities to better support DUC communities and to disseminate best practices to other CCI administering agencies.
10. On a regular basis, coordinate with state agencies (e.g., SGC, OPR) that are already fostering partnerships with philanthropy to increase community capacity, support community engagement where the state cannot, and to catalyze programs.

RECOMMENDATIONS FOR THE BIDEN ADMINISTRATION AND THE WHITE HOUSE COUNCIL ON ENVIRONMENTAL QUALITY (CEQ)

1. Create a clear list and calendar of Justice40-covered programs that can be easily interpreted by different user types and is updated on a regular cadence.
2. Develop a definition for "benefits" in collaboration with the White House Environmental Justice Advisory Council (WHEJAC), in the context of delivering "benefits to disadvantaged communities." Any reported benefits should be reflective of both benefits and potential risks including unintended ones.
3. Create a data tracking mechanism that will be used by all J40-covered programs to track delivery of benefits; release tracking mechanism for public input on included metrics.
4. Create metrics around community engagement to demonstrate the degree to which community members and groups were involved in driving funded projects. Require J40-covered programs to track this metric.
5. Require J40-covered programs to track and report on the primary funding recipient type for all projects (e.g., households, companies, community-based organizations, local governments).
6. Require J40-covered programs to track and report on whether job quality and job creation requirements were included in program guidelines.
7. Release benefits outcomes data from J40-covered programs on a regular cadence that includes information on demographics including race/ethnicity, where possible, and is displayed in a way that helps community understand how investments are flowing to them or not.
8. Solicit public feedback on J40 reporting processes and outcomes on a regular cadence; iteratively improve processes and public reporting.
9. Support efforts like the J40 Accelerator or Greenlining the Block that prioritize community capacity, particularly in Black and Brown communities that are most vulnerable to climate change.
10. Identify possible mechanisms through which to give community members, community-based organizations, as well as the WHEJAC more oversight and decision-making power around how J40-covered programs are designed and implemented.

RECOMMENDATIONS FOR PHILANTHROPY

1. Invest in the long-term strength of member-based organizing institutions who can anchor local collaboratives implementing climate dollars.
2. Invest in the leadership of Indigenous, Black, and Latinx climate justice leaders to ensure that those who are experiencing the most harm are leading the way to solutions.
3. Support regional collaboratives, like EJ Ready in Los Angeles County and Greenlining the Block, to bring together environmental justice and community-based groups to prepare to receive government funds on their terms.
4. While public funding is catalytic, it is rarely enough on its own; the philanthropic sector should finance and fund projects that help close gaps during the planning, pre-development, and implementation phases of using public dollars.
5. When public funds are disbursed on a reimbursement basis, take the financial risk off community organizations by funding projects upfront.
6. Offer financial capacities to receive funding and allocate it to community groups as a way to support community-driven work.
7. Fund opportunities to bring community-based organizations, public agencies, and funders together in a way that uplifts community agency, facilitates relationship building, identifies challenges and barriers around resource delivery, and improves long-term coordination.
8. Fund food, childcare, and participation stipends at community engagement events to supplement these activities where public dollars cannot be used.
9. Fund community and labor coalition building, so that concerns about jobs and community benefits and risks can be addressed concurrently.
10. Fund equity-focused evaluations of climate investments that can contribute to iterative improvements.

Appendix B. Interviewees and Informants Consulted for Report

GENERAL

Alexandra Gallo, US Environmental Protection Agency
Amee Raval, Asian Pacific Environmental Network
Bahram Fazeli, Communities for a Better Environment
Brent Newell, Law Office of Brent J. Newell
Chris Chavez, Coalition for Clean Air
Ena Lupine, Strategic Growth Council
Hector Huezo, Jobs to Move America
Kimberly McCoy, Central California Asthma Collaborative
Kirin Kumar, Strategic Growth Council
Kevin Hamilton, Central California Asthma Collaborative
Luis Olmedo, Comite Civico del Valle
Paul English, Public Health Institute
Phoebe Seaton, Leadership Counsel for Justice and Accountability
Raquel Dominguez, Earthworks
Rachel Morello-Frosch, UC Berkeley Department of Environmental Science, Policy and Management and the School of Public Health
Veronica Garibay, Leadership Counsel for Justice and Accountability
Zach Lou, California Green New Deal Coalition

California Air Resources Board (CARB)

Mario Cruz
Alex Stockton
Bailey Smith
Nicole Enright
Anna Scodel
Valerie Carranza

Gathering of EJ Leaders, Fall 2022

Angelo Logan, Liberty Hill Foundation
Dillon Delvo, Little Manila Rising
Jonathan Pruitt, California Environmental Justice Alliance
Jose Calderon, Latino and Latina Roundtable of the San Gabriel and Pomona Valley
Lina Mira, Latino and Latina Roundtable of the San Gabriel and Pomona Valley
Lucas Zucker, Central Coast Alliance United for a Sustainable Economy
Luis Olmedo, Comite Civico del Valle
Matt Holmes, Little Manila Rising
Rachel Morello-Frosch, UC Berkeley Department of Environmental Science, Policy and Management and the School of Public Health
Raquel Mason, California Environmental Justice Alliance
Tiffany Eng, California Environmental Justice Alliance
Veronica Garibay, Leadership Counsel for Justice and Accountability

CASE STUDIES

Affordable Housing Sustainable Communities

Enterprise Community Partners
Heritage Housing Partners
Many Mansions
National Community Renaissance
Self-Help Enterprises
Strategic Growth Council
Yurok Indian Housing Authority

Clean Truck and Bus Vouchers (HVIP)

CALSTART
California Air Resources Board
Coalition for Clean Air
The Greenlining Institute

Community Air Protection Incentives (AB 617)

AB 617 Community Steering Committee Member, Eastern Coachella Valley
California Air Resources Board
Communities for a New California Education Fund
UC Davis
Little Manila Rising
San Joaquin Valley Air Pollution Control District

Community Solar Pilot

Anza Electric Cooperative, Inc.
GRID Alternatives
Santa Rosa Band of Cahuilla Indians

Dairy Digester Research and Development Program (DDRDP)

Association of Irritated Residents
California Department of Food and Agriculture
Food & Water Watch
Law Office of Brent J. Newell
Leadership Counsel for Justice and Accountability

Forest Health Program

California Department of Forestry and Fire Protection (CAL FIRE)

Hoopa Valley Tribe

Mid Klamath Watershed Council

Resource Conservation District of Greater San Diego County

Yuba Water Agency

Yurok Tribe

High-Speed Rail

California High-Speed Rail Authority

Central California Environmental Justice Network

Central Valley Community Foundation

Chinatown Fresno Foundation

City of Fresno, Development & Resource Management Department

Strategic Growth Council

Transportation Solutions Defense and Education Fund (TRANSDEF)

Low Carbon Transit Operations Program (LCTOP)

Caltrans

Monterey-Salinas Transit

Move LA

Sacramento Regional Transit District

San Joaquin Regional Transit District

Strategic Growth Council

Yolo Transportation District

Sustainable Agricultural Lands Conservation

California Climate and Agriculture Network (CalCAN)

California Department of Conservation Division of Land Resource Protection

California Rangeland Trust

Sequoia Riverlands Trust

University of California Division of Agriculture and Natural Resources

Transformative Climate Communities

Edge Collaborative

Environmental Health Coalition

The Greenlining Institute

Little Manila Rising

San Diego Foundation

South Los Angeles Transit Empowerment Zone (SLATE-Z)

Strategic Actions for a Just Economy (SAJE)

Strategic Concepts in Organizing and Policy Education (SCOPE)

Strategic Growth Council

COMMUNITY CONVERSATIONS

Eastern Coachella Valley

Anna Lisa Vargas, Communities for a New California Education Fund

Mayte Ruiz Garcia, Communities for a New California Education Fund

Rebecca Zaragoza, Leadership Counsel for Justice and Accountability

Yunuen Ibarra, Líderes Campesinas

Oxnard

Ana Rosa Rizo-Centino, Central Coast Climate Justice Network

Daniel Gonzalez, Future Leaders of America

Haley Ehlers, CFROG - Climate First: Replacing Oil & Gas

Ivan Vega, Future Leaders of America

Lucas Zucker, Central Coast Alliance United for a Sustainable Economy

Teresa Gomez, Californians for Pesticide Reform

Richmond

Katt Ramos, Richmond Our Power Coalition

Najari Smith, Rich City Rides

Torm Nompraseurt, Asian Pacific Environmental Network

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