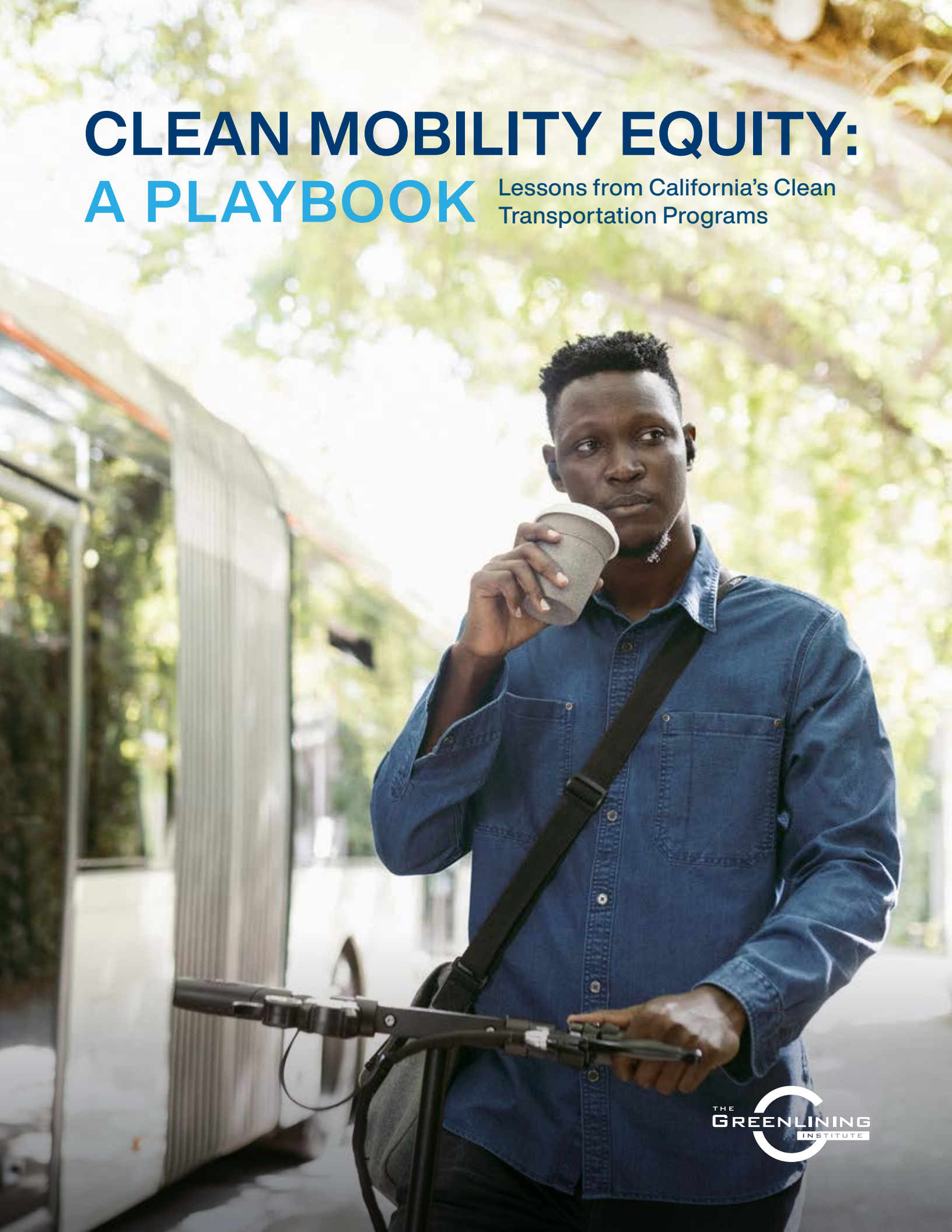
CLEAN MOBILITY EQUITY:
A PLAYBOOK

Lessons from California's Clean Transportation Programs



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The opinions expressed herein do not necessarily reflect those of the individuals who reviewed it. The Greenlining Institute bears sole responsibility for this report's contents.

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Executive Summary

California is a world leader in climate change policy and programs—and a key cornerstone of the state's strategy has been decarbonizing the transportation sector. California's investments in clean transportation programs have ballooned in a relatively short time, and include financial incentives for electric vehicle purchases, electric vehicle carsharing mobility hubs and community-driven clean mobility pilots. These programs range widely to meet various needs across urban, suburban and rural communities. Over time these programs have intentionally centered equity, prioritizing the needs of low-income communities of color. Clean mobility programs can not only help fight climate change and clean the air, they can improve mobility for residents of underserved communities, reduce traffic and dependence on cars, and be engines of economic empowerment that help reduce the racial wealth gap.

We need to better understand whether and how clean transportation programs truly address equity in a comprehensive and effective way and make use of knowledge gained in recent years. This report reviews California's clean mobility equity programs, noting successes, pitfalls and areas for improvement.

This report serves as both a guide for California as we continue evolving our clean mobility programs to more meaningfully center equity and as a guide for other states and the federal government as they move to develop and implement clean transportation equity programs.

Best Practices that Make Equity Real in Clean Mobility Programs

Over the past three decades, The Greenlining Institute has helped to redirect billions of dollars into the communities we represent, but these programs have always operated within the confines of an extractive and exclusionary economic system. To greenline community investment, we have developed a set of rules to govern funds and programs intended to address poverty and inequity. Without standards, we end up reinforcing the structures that caused these problems in the first place. These standards are meant to address failures of equity in our current community investment model.

In this report we identified 10 ways that California clean mobility programs uphold our equity standards and present them here as best practices that should be replicated and scaled in all clean mobility programs.

1. **Emphasize Anti-Racist Solutions**

   Undoing racist policies like redlining[1] and highway construction[2] that segregate communities of color requires anti-racist strategies to target and prioritize resources to communities of color—while dismantling the structures that reinforce these inequities in the internal planning, power, and decision-making structures across all sectors of the transportation system.

   Best Practices from Case Studies:

   i. Develop mobility equity policies, programs and pilots that are specifically designed to overcome the obstacles that priority communities face when adopting clean mobility technologies, and target 100% of funding toward communities who have been harmed most by systemic racism.

2. **Prioritize Multi-Sector Approaches**

   We must prioritize mobility approaches that provide co-benefits by addressing multiple issues and sectors at once, such as wealth-building, climate adaptation, anti-displacement and more, along with outreach, engagement, capacity-building that enables communities to help design their own clean transportation future.

   Best Practices from Case Studies:

   i. Require clean mobility programs to integrate approaches beyond greenhouse gas reduction, improved air quality or vehicle-miles-reduction to provide a holistic approach to improving mobility. Approaches include sustainable land-use patterns, use of vehicles during off times for community needs like (like grocery shopping) and emergency response (mobility for evacuation, backup battery power for buildings), improved active transportation infrastructure (bike lanes, sidewalks), workforce development and quality jobs.

   ii. Combine program outreach with other services such as assisting low-income residents with getting a bank account or credit card, obtaining a low-cost cell phone or obtaining health care or employment.

   iii. Develop a streamlined and coordinated outreach and application process for the many overlapping incentive programs for electric vehicles, solar power and other related programs. Require that all complementary programs be designed from the beginning with coordinated approaches and applications, applying a consistent racial equity lens.

3. Deliver Intentional Benefits

Benefits cannot trickle down to communities; they need to go directly to the people most in need in the most impactful ways, while not increasing or creating new burdens.

Best Practices from Case Studies:

i. Use a targeted universalism[3] approach to all mobility programs to "set universal goals that are pursued by targeted strategies based upon how different groups are situated within structures, cultures, and across geographies to obtain the universal goal." Designing a program to be accessible to those with the highest barriers will ensure that all will benefit.

ii. Avoid unintended consequences of direct investments in low-income communities of color by requiring the development of community-driven anti-displacement strategies.

4. Build Community Capacity

To ensure under-resourced communities are able to apply for, develop and implement clean mobility equity programs, programs must require and build in technical assistance, capacity building, and long-term training and skills development.

Best Practices from Case Studies:

i. Sufficiently fund capacity building and technical assistance for under-resourced communities in the planning, application, implementation and evaluation of clean mobility programs. Capacity building and technical assistance should be both offered broadly and tailored to serve communities most in need.

5. Be Community-Driven At Every Stage

Community-centered investment means lifting up community-led ideas and sharing decision-making power throughout every phase of a program's goal-setting, needs assessments, outreach, implementation and evaluation.

Best Practices from Case Studies:

i. Involve stakeholders in the design and development of clean mobility programs as early as possible to vet the details and ensure that programs meet the needs of all applicants and communities, particularly those with the most barriers.

ii. Build off existing, community-trusted programs that already have community buy-in and support. Instead of creating a brand new program that requires additional outreach and implementation, funding can simply help to reduce the emissions of existing programs.

6. **Establish Paths Toward Wealth-Building**

In addition to just providing cost savings, clean mobility programs must create jobs, workforce development and training opportunities. They must contract with local businesses and grow community-owned assets and infrastructure.

Best Practices from Case Studies:

i. Require transformative elements that build wealth in community such as:

a. Workforce development and training components, particularly with youth, communities of color, and re-entry populations, and providing career pathways to the green economy;

b. Prevailing wages and fair labor standards;

c. Contracting with women and minority-owned businesses;

d. Encouraging entrepreneurship and the development of community-owned mobility services;

e. Rules stating that in the case of a program or project being discontinued, the grant-funded mobility assets (e.g. electric cars, bikes, etc.) are transferred to community partners at no-cost;

f. Compensating residents and community-based organizations for their time and expertise when assisting in conducting outreach and engagement.

g. Tracking how mobility programs are benefiting low-income household wealth.

Recommendations

1. **Immediately increase funding in California and nationally scale programs that comprehensively approach mobility equity and are led by communities, such as the Sustainable Transportation Equity Project.[4]**

   ii. California has developed community-driven clean mobility equity programs in which residents decide which transportation modes work best for them. Yet compared to other programs, these are insufficiently funded and cannot meet demand. State and federal funds must support mobility programs that holistically reduce greenhouse gases, air pollution and vehicle miles traveled while prioritizing the needs of low-income communities and communities of color. We must prioritize, replicate and scale community-driven clean mobility equity programs.

2. **Institute structural reforms to interagency coordination and funding to maximize available resources for clean mobility investments and to target them to the people with the most barriers.**

   i. California has multiple state agencies pushing forward their own clean mobility programs and investments—all with varying approaches to equity. For example, California's Air Resources Board and Energy Commission both offer electric vehicle incentives and electric school bus replacement programs. This has led to duplication and inefficiencies. We need a coordinated federal and state strategy that ties together all of these efforts and maximizes available resources and efficiencies.

   ii. Our limited available electric vehicle incentives should solely be targeted to the people who face the most barriers to access. The Clean Vehicle Rebate Project[5] has been allocated hundreds of millions of dollars over the years, yet it disproportionately benefits[6] middle and higher-income White people. Our limited federal and state funds should instead be designated for more equitable programs like Clean Cars 4 All[7] and the Clean Vehicle Assistance Program[8] that are designed to reduce transportation disparities, not widen them.

3. **Phase out programs that continue to entrench our dependency on single-occupancy vehicles.**

   i. California has disproportionately funneled dollars into the programs that subsidize electric vehicle purchases—yet this is not sufficient[9] to solve the climate crisis. Governments at all levels should still continue to facilitate a transition to vehicle electrification focusing on the people who face the most barriers to access, but in the long run must foster policies that reduce congestion, vehicle trips and unsustainable land use patterns. While some regions are indeed inherently more car dependent, in these areas state and federal funds should fund programs that reduce the need for costly car ownership, such as Our Community CarShare,[10] Green Raiteros,[11] Ecosystem of Shared Mobility,[12] the Agricultural Workers Vanpool Project,[13] the Rural School Bus Pilot and more.

Introduction

As part of the effort to fight climate change, California has created a wide variety of clean mobility equity programs: electric vehicle subsidies, electric carsharing, electric school buses, vanpooling and more. Such clean mobility programs can not only help fight climate change and clean the air, they can improve mobility for residents of underserved communities, reduce traffic and dependence on cars, and be engines of economic empowerment that help reduce the racial wealth gap.

The vast majority of these urban, suburban and rural programs are still in their pilot phase and are experimenting with innovative strategies to deploy clean mobility technology in an equitable way. Yet despite this progress, these programs have a long way to go to ensure that clean mobility is truly accessible to the highest-need populations. Low-income communities of color typically suffer from disproportionate air pollution and inadequate mobility options. When it comes to delivering on equity, we need to understand how these programs succeed, how some miss the mark, and how they can be held accountable to meeting a higher standard of equity.

To produce this report we researched a wide variety of innovative clean mobility programs in California. While Greenlining has been involved in passing legislation and advocating for the creation of many of these programs, our role is as outside stakeholders rather than program administrators. We sought to understand how these programs are performing from an equity perspective and how they need to improve, given that these efforts are still in their infancy. The time to evaluate these programs is now, as California enters a new phase of its transportation electrification and clean mobility efforts, seeking to ban the sale of new gas vehicles by 2035 and simultaneously reduce automobile dependence. In addition, the arrival of the Biden-Harris administration and its ambitious climate agenda presents an opportunity to ensure that national clean transportation efforts are informed by California's years of experience.

The strategies that may have seemed bold, innovative and ambitious even a few years ago now constitute just the bare minimum of what we need. It is now more clear than ever that we cannot fully rely on a transportation electrification strategy that centers single-occupancy vehicles. The evidence[14] clearly shows that a clean transportation revolution will fail to adequately address climate change if it does nothing to wean us off of automobile dependency; fails to liberate us from traffic; continues to expand highways at the expense of walking, biking and public transit; and if we do not drastically reform the way that we fund transportation.

> "Build programs and funding around projects that communities say they want and need, not just what government thinks they need"[15]
>
> – California Air Resources Board

Additionally, meeting a higher standard of equity means reimagining the traditional, prescriptive transportation planning and decision-making process. We need a more inclusive approach that centers marginalized people throughout all stages of ideation, development and implementation of clean mobility programs and pilots. Because numbers alone cannot tell the story of people's lived experiences, this equity evaluation of clean mobility programs introduces qualitative measures of success that seek to humanize, adapt and improve these programs. This report seeks to answer the following questions:

1. How well do California's many clean mobility equity programs and pilots deliver on equity?
2. Which types of programs should California now prioritize and expand?
3. Which types of programs should California reform or phase out?
4. What best practices, challenges, lessons learned and recommendations can be used by other states seeking to replicate these programs and pilots?

Definitions

The terms below show up consistently throughout the report. Additional definitions and background information on these topics are provided in the Appendix.

Racial equity is defined by The Greenlining Institute as transforming the behaviors, institutions and systems that disproportionately harm people of color. Racial equity means increasing access to power, redistributing and providing additional resources, and eliminating barriers to opportunity in order to empower low-income communities of color to thrive and reach full potential. Our emphasis on racial equity is not about excluding other marginalized groups – we recognize that equity impacts intersect and compound with other identities such as gender, sexual orientation, ability, etc. This report interchangeably uses both the terms "racial equity" and "equity" depending on the context – because to us, "equity" inherently means "racial equity."

Disadvantaged communities are defined by the California Environmental Protection Agency as California's top 25 percent of census tracts that suffer the most from pollution, poverty, health and other socioeconomic burdens.

Low-income communities are defined as communities whose median household income is 80 percent of state median household income or less.

Priority populations refers to disadvantaged communities, low-income communities, and low-income households.

Equity Evaluation Methodology

Purpose

As equity has become mainstream, the word is now used so often that it is beginning to lose its meaning. This has led to "fakequity"—where equity is a stated goal, but not backed up by any strategy around how to ensure equity throughout the process, outcomes and evaluation. Additionally, many equity approaches are only half-baked or half-implemented. Conducting an equity evaluation marks the critical first step toward a higher standard because it holds decision-makers accountable to the communities they serve. This methodology breaks down a wide variety of equity approaches that are needed, from the more simple and straightforward to the more complex and transformative.

Traditionally, equity analyses and evaluations center around quantitative data: changes in the number of participants, vehicle miles traveled, air quality, travel times, transportation costs, etc. Yet the nuances of people's lived experiences often get lost in an approach that solely analyzes numbers. Equity has much larger implications that go beyond just the mobility program itself, with impacts stretching across a community's many priorities as well as their systems and processes to achieve those goals. These complex interactions require a qualitative analysis.

To conduct this evaluation, we interviewed over 50 stakeholders who have been deeply involved in the development and implementation of these clean mobility programs. We spoke with program administrators, applicants and awardees. Additional expert reviewers provided feedback on the equity evaluation methodology below and the overarching recommendations. They included staff from state agencies, nonprofits, equity consultants, school districts, universities, utilities and more.

We developed this methodology to conduct an equity evaluation of these particular programs. However, our methodology can serve as a guide that can be applied to any clean mobility program to help to understand how equity shows up strongly and how it could be improved. The specific methodology should be augmented or adjusted to best fit individual communities' needs, assets and priorities. Regardless, when evaluating programs it is important to work with local community-based organizations to understand how these equity approaches relate to their needs. Ideally, this should utilize outside experts hired and fairly compensated to conduct an impartial equity evaluation of the program. While Greenlining has been involved in passing legislation and advocating for the creation of many of these programs, our role is as outside stakeholders rather than program administrators. Equity is a skillset, and a third party would be better able to execute an unbiased, accurate equity assessment and make more robust recommendations than an internal team conducting a self-evaluation.

Equity Evaluation Methodology

Our methodology has two major components that form the basis of how we evaluated every clean mobility equity program included in this report:

I. Greenlining's Six Standards for Equitable Investment[16]

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II. Greenlining's Making Equity Real Framework[17]

I. Six Standards of Equitable Investment

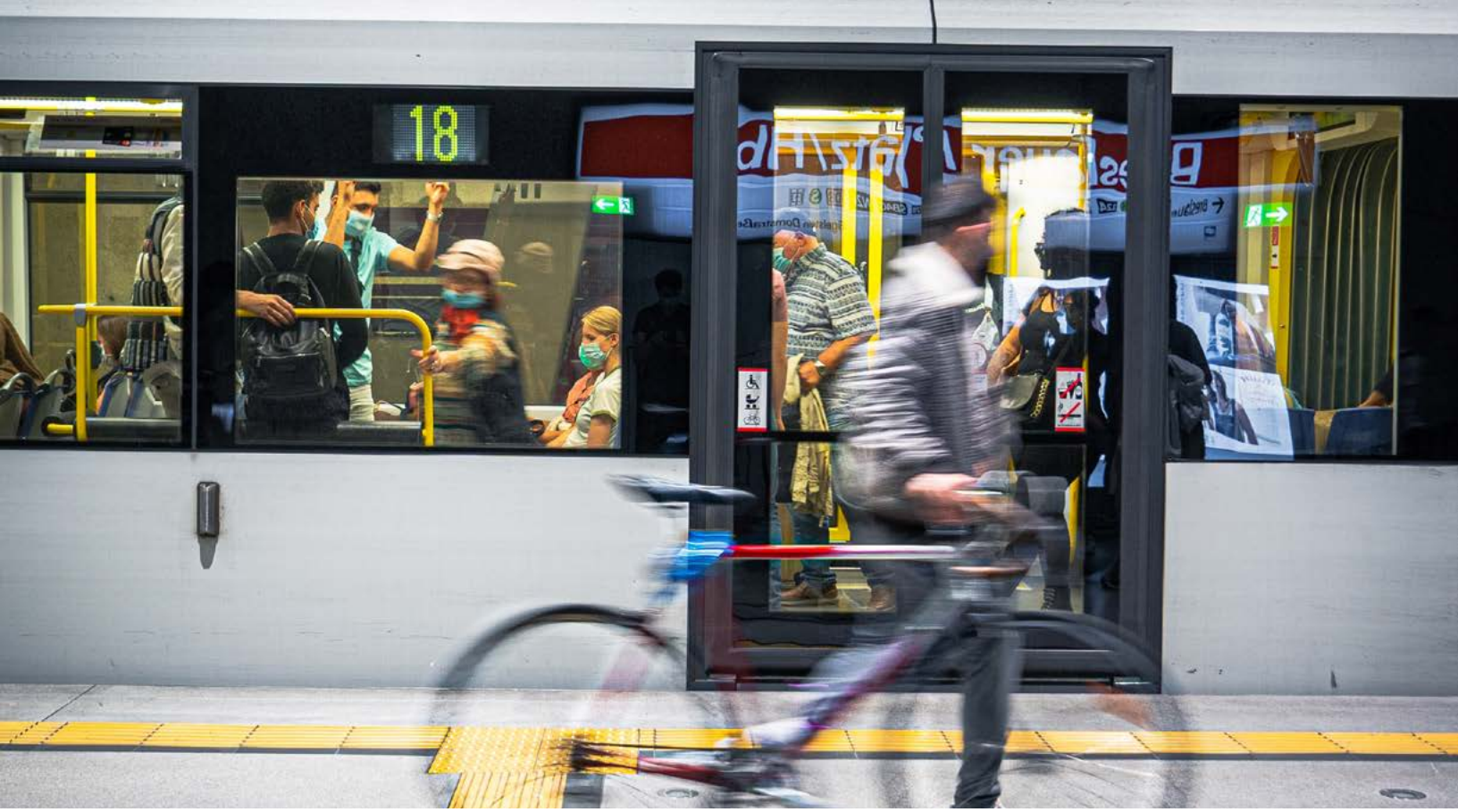
As outlined in our Greenlined Economy Guidebook,[18] the six standards are:

1. Emphasize Anti-Racist Solutions,
2. Prioritize Multi-Sector Approaches,
3. Deliver Intentional Benefits,
4. Build Community Capacity,
5. Be Community-Driven at Every Stage, and
6. Establish Paths toward Wealth-Building.

These standards are complex and multifaceted, meaning that many different approaches can be used to adhere to them, especially depending on where an entity is starting from. **We also note a difference between a "minimum" and a "transformative" equity approach. In short, minimum approaches are the basic, essential building blocks of equity policy. Transformative approaches are the more innovative and revolutionary changes that will really shift power and transform the system that created the injustices in the first place.**

Put another way, minimum equity approaches represent the starting point, commonly seen in programs in the early stages of introducing equity. They frequently focus on reducing harm and can be essential to support creation and growth of more transformative approaches. Transformative approaches by their very nature are more challenging and will require significant investments of time, political buy-in and willpower. The process of shifting power to communities requires building trust and investing sufficient resources to make the process work.

Both types of approaches are equally important. Yet depending on where government agencies are starting from, minimum approaches tend to be relatively quicker and easier to achieve, while transformative approaches will require significantly greater levels of resources, effort and time across all levels of government. Programs will likely rely on a healthy mix of minimum and transformative equity approaches.



Equity Evaluation Rubric

This equity evaluation rubric informs our evaluation of the case studies and reflects the complexity of how various approaches can meet the Six Standards for Equitable Investment. Within each standard, we have organized a list of approaches on a gradient based on whether they are closer to the minimum or transformative approach, depending on how much time, resources and effort are generally required. The list of approaches below is illustrative and is not intended to be exhaustive. Additionally, users may find that not all of these equity approaches apply to specific projects and programs. We sourced many of these approaches from the programs we evaluated, and also collected feedback on this methodology from equity experts, state agencies and the programs' administrators. Equity experts in particular provided thoughtful feedback on how to push programs to an even higher standard. While many of the programs we evaluated in this report do align with the minimum equity approaches, very few adhere to the most transformative equity approaches and therefore have significant room for growth.

These example equity approaches will grow and evolve over time and will look different in various places, and the degree to which an approach may be considered minimum or transformative will vary based on each individual community's context and conditions. The key takeaway is that program administrators should work with community partners to identify the appropriate equity approaches and metrics to understand whether they are meeting the mark, and if not, how to adjust and improve over time so that they can advance toward more transformative approaches.

1. **Emphasize Anti-Racist Solutions.**

Problem: Racist policies like redlining,[19] highway construction[20] that segregates communities of color, and urban renewal[21] created stark racial disparities in transportation, such as longer and less reliable commutes, unsafe infrastructure and disproportionate air pollution.

Solution: Underlying inequities need to be addressed to build anti-racist[22] solutions that explicitly target and prioritize the most impacted communities. At the same time, anti-racism means dismantling the structures that reinforce these inequities and creating new, racially equitable structures. This begins by centering anti-racist approaches in the internal planning, power and decision-making structures across all sectors of the transportation system.

Examples:

- Conducting racial equity analyses mandated to determine disproportionate impacts or burdens on people of color. One example is equity analysis required by Title VI of the Civil Rights Act,[23] yet this only seeks to maintain the status quo, not to advance racial equity. Consider strategies to improve these analyses,[24] such as partnering with residents and community-based organizations in the most impacted communities to conduct them.
- Adopting race-conscious approaches to outreach and engagement such as translation, interpretation and other culturally appropriate solutions that challenge the centering of dominant White culture[25] and standards as the norm.
- Challenging structural racism,[26] power, privilege and implicit bias within the internal policies, commitments, organizational and leadership of a local/state government agency or program administrator. For example, promote hiring, career advancement, retention and representation of people of color in managerial or executive roles. Advancing structural equity[27] also relates to governments' external approaches to how they interact and partner with communities of color.
- Fostering equitable processes around co-creation and sharing decision-making power[28] with communities of color, as opposed to superficial community engagement that simply "checks the box."
- Evaluating the impact and effectiveness of all anti-racist approaches that are undertaken in order to improve them over time. For example, conduct racial equity evaluations of programs or agencies by hiring third party consultants[29] or establishing a department of racial equity to do so.
- Prioritizing the distribution of investments to populations who have been harmed most by systemic racism. Examples include prioritizing investments in formerly redlined communities, as seen in Oakland's paving[30] and bike[31] plans.
- Giving reparations to Black[32] and Indigenous[33] people. This should remain open-ended, depending on —individual community needs. Examples include reparations to Black households for slavery, land taxes and transfers for Indigenous communities, shifting police funding to proactive investment, and reparations for infrastructure and the built environment.[34]

2. **Prioritize Multi-Sector Approaches.**

Problem: Programs may be siloed, but problems are not. Transportation and mobility funding often is only available for pollution reduction, infrastructure, capital projects or operations, which move the equity needle forward but on their own do little to foster transformative systems change.

Solution: We must prioritize and fund mobility approaches that address multiple issues and sectors at once, such as outreach, engagement, technical assistance, capacity building, workforce training and development, climate adaptation, anti-displacement and more. Communities of color do not experience these issues in isolation. These issues are cyclical in nature and compound one another—and therefore we need holistic approaches and associated investments to truly advance equity.

Examples:

- Requiring that multi-sector issues are addressed, such as transportation, energy, land use, housing, emissions/vehicle miles traveled reduction, house, public health, jobs and more.
- Requiring inclusive partnerships to facilitate effectively addressing multi-sector issues. For example, a mobility service that partners with a low-income housing site[35] or a workforce development program.
- Evaluating whether the benefits (e.g. access, emission reduction, quality of life, etc.) actually show up in multiple sectors and whether the program creates positive impacts across multiple aspects of people's lives, in order to improve approaches over time.
- Reducing physical, financial, technological, or cultural/language barriers to a mobility program[36] or service. For example, creating alternatives for people without smartphones or bank accounts, helping people to obtain a bank account or smartphone, or providing multiple language formats.
- Ensuring that the specifics of multi-sector approaches are not fully prescribed by the program guidelines, and individual communities have the flexibility to select and prioritize the elements they value and add additional sectors as needed.

3. Deliver Intentional Benefits.

Problem: Programs are often designed only to provide benefits that trickle down to communities rather than going directly to the people most in need in the most impactful ways. For example, simply expanding the zero-emission vehicle market may create some air quality benefits to pollution-burdened communities, but without specifically targeting approaches to reach low-income consumers, such programs will not deliver intentional or direct benefits within communities with the greatest needs.

Solution: Guaranteeing benefits to marginalized communities must break down barriers to accessing those benefits, while not increasing or creating new burdens such as financial hardship or displacement.

Examples:

- Carving out set-aside funding specifically for communities of color in a way that's direct, meaningful and assured. For example, the Clean Mobility Options[37] program set aside $2 million for tribes.
- Requiring clear criteria to identify and target set-aside funding to the communities that actually need it most. For example, CalEnviroScreen 3.0[38] targets resources based on the highest socioeconomic and pollution burdens.
- Ensuring that the investments and their funding amounts are actually sufficient to provide meaningful benefits.
- Prioritizing funds to communities of color who consistently miss out on competitive programs and investments due to a lack of capacity, awareness, and trust with government, including small, rural and tribal communities, etc.
- Using a racial equity targeted universalism[39] approach that designs programs to be accessible to the demographics with the highest barriers.
- Including contingency plans for avoiding and mitigating potential harms. For example, developing community-driven anti-displacement and climate adaptation plans, etc.
- Hiring a third party who understands the local context and culture to evaluate whether intentional benefits have been delivered in a way that meets community-identified needs without increasing new burdens. This can help improve approaches over time.
- Designating unrestricted funds to communities of color to use at their own discretion to deliver intentional benefits in a way that meets their needs beyond just the primary focus of the mobility program. For example, fund community engagement, capacity building, workforce training, etc.

4. **Build Community Capacity.**

Problem: Long-term disinvestment and discriminatory policies can erode a community's capacity for leadership, technical expertise, organizing or political capital. This can limit a community's ability to apply for, develop and implement programs.

Solution: Programs must prioritize capacity-strapped communities by building in and requiring strong community awareness, technical assistance, long-term training and skills development. Furthermore, the quality and outcomes of this technical assistance capacity-building must also be evaluated. Additionally, to further build capacity, programs must create or leverage contracting mechanisms to pay residents, community-based organizations and local leaders for their participation and input.

Examples:

- Providing technical assistance and capacity building to communities during the application process for a specific program or funding stream, either from the funding agency or a contracted third party provider. Teaching and engaging around key vocabularies and processes requirements.
- Once funding is received, providing technical assistance and capacity building to assist with the development and implementation of plans, projects or programs— particularly those that are community-driven and equitable.
- Compensating the providers and the recipients of the technical assistance and capacity building for their time and participation.
- Evaluating the quality and equity outcomes of technical assistance, capacity building and skills development that is provided in order to improve approaches over time.
- Protecting, uplifting and strengthening existing assets within the local community, such as community-based organizations, small businesses, cultural values, local credit unions, community gardens, local leaders and innovators, community land trusts and more. The available community assets should be recorded and catalogued and easily accessible for future community organizing, projects or programs.
- Building and funding cross-sector community partnerships (i.e. between cities, community-based organizations and others) that expand the capacities and expertise of community groups so that they can more readily participate in future projects.
- Providing training and skills development—such as community organizing, youth programs, fundraising, research and nonprofit financial management—over a longer horizon to grow communities' long-term capacity to build future projects on their own and attract and secure resources.

5. **Be Community-Driven At Every Stage.**

Problem: Traditional transportation planning and decision-making generally occur behind closed doors, with only superficial community engagement, which leads to a prescriptive approach that does not meet community-identified needs.

Solution: Prioritize community-centered investment by lifting up community-led ideas and sharing decision-making power. Community members and organizations should be part of every phase of the program or policy, from goal-setting to needs assessments, outreach, evaluation and sitting on application review panels and advisory committees.

Examples:

- Limiting corporate power and influence on clean mobility plans and programs. For example, requiring that mobility companies or transportation consultants can only be sub-applicants to grant programs.
- Having community advisory committees that represent the historically underrepresented demographic groups of the region—and giving them real decision-making power and influence.
- Compensating residents or advisory committee members for their time and expertise.
- Community stakeholders contributing to the design and development of the program and its guidelines before it's finalized.
- Ensuring programs reflect the challenges, priorities and addresses needs of impacted communities of color, which can be identified through deep community engagement or a community-identified mobility needs assessment.[40]
- Adopting models of community engagement that center community decision-making and empowerment,[41] as opposed to superficially informing or consulting with the community.
- Requiring that all program applications must include a community anchor organization as lead or a paid partner who has genuine decision-making power.
- Inviting equity and community engagement experts to help develop evaluation scoring criteria, participate on review panels, needs assessments, user surveys, collaborative data analysis,[42] etc.
- Ensuring that the models of community decision-making and veto power are not just designated into one phase of the program but show up throughout program development, implementation and evaluation.
- Evaluating the effectiveness of community-driven processes and outcomes to improve approaches over time.
- Building trust and increasing collaborative governance[43] with communities in order to co-define problems, co-design processes, co-create solutions and co-deliver actions.[44]
- Decision-makers giving up some power and influence to disenfranchised people. For example, participatory budgeting.[45]
- Fostering community-driven governance[46] within policy development and implementation.

6. **Establish Paths Toward Wealth-Building.**

Problem: While access to reliable transportation options remains a critical lifeline to jobs, education and opportunities,the racial wealth gap continues to grow today. Private companies and the gig economy are eager to profit off of the new mobility sector at the expense of and by exploiting low-income people and communities of color.

Solution: We need clean mobility programs to catalyze a broader set of pathways to wealth building. In addition to just cost savings, clean mobility programs must also create high quality jobs, engage in fair labor practices, contract with local businesses, and grow community-owned assets and infrastructure in low-income communities and communities of color.

Examples:

- Providing cost savings for low-income people and organizations of color (i.e. transportation cost savings, reducing administrative burdens of program applications, etc.)
- Providing residents with a means of building their credit, such as providing affordable loan financing.[47]
- Creating jobs, expanding workforce development, and providing hands-on training and education opportunities.
- Ensuring that jobs have fair labor practices, living wages, benefits and worker protections.
- Evaluating the outcomes and effectiveness of wealth building strategies in order to improve approaches over time.
- Building wealth by growing community assets—for example, by contracting with local businesses, increasing local economic activity, investing in entrepreneurship programs, cooperatively-run programs[48] and community-owned infrastructure[49] and services.

II. The Making Equity Real Framework

Upholding the Six Standards for Equitable Investment represents only one component of the equity evaluation. It is also critical to further analyze whether and how these standards show up from start to finish throughout a program. To understand this, the equity evaluation methodology integrates Greenlining's Making Equity Real Framework.

The Making Equity Real Framework seeks to uncover how equity shows up across a program's:

1. **Mission, Vision and Values** — How is equity described in the context of the overall mission/goal? Is equity a core component? Is equity missing?
2. **Process** — How was equity embedded into the process of developing the program? How was equity embedded into how the program was implemented? How are decisions made or influenced by communities that have less political power or voice?
3. **Outcomes** — How has implementation led to equity outcomes? What explicit equity outcomes are described in the program?
4. **Measurement and Analysis** — How is equity progress measured? How do we know that equity goals and community benefits were achieved?

This framing is critical because it adds layers of accountability. Based on previous evaluations of equity policies and programs, we found that while it was relatively commonplace to state equity as a mission or goal, often programs failed to develop a clear strategy for embedding equity from start to finish throughout their development, implementation and evaluation. Understanding how equity is accounted for across a program's mission, process, outcomes, measurement and analysis allows for a comprehensive identification of what works, what gaps exist and how to address them.

Illustrative Worksheet

This worksheet follows the process that our team took to conduct our equity evaluations of the case studies that follow. We collected information from stakeholder interviews, a literature review and feedback from reviewers—and then referenced the equity evaluation rubric above to describe how the Six Standards for Equitable Investment did or did not show up across the program's mission, process, outcomes and the measurement and analysis.

In this illustrative example, a hypothetical clean mobility program has been evaluated using the rubric above. While this hypothetical example focuses on a Black community, this exercise can be applied to any racial group, a multi-racial community, a low-income community, the disability community or any other community. While only one or two approaches are included as examples in each category, real life programs would likely include many more approaches in each category. Given the interconnected nature of the Six Standards for Equitable Investment and the Making Equity Real Framework, some approaches may apply across multiple boxes of the worksheet. Users can find a downloadable blank worksheet on our website.

Illustrative Worksheet

Six Standards for Equitable Investment	Making Equity Real Framework			
	In the Mission	In the Process	In the Outcomes	In the Measurement and Analysis
1. How does the program emphasize anti-racist solutions?	The mission is to benefit a primarily Black community with limited transportation options due to a historic lack of investment.	The program developed an advisory committee of Black residents. However, the advisory committee has no real decision-making authority regarding the program.	50% of Black residents surveyed report that this mobility program has improved their overall quality of life.	Black residents were not involved in co-developing the appropriate quantitative and qualitative racial equity metrics to measure success.
2. How does the program prioritize multi-sector approaches?	The goals are to 1) increase mobility, 2) reduce pollution, and 3) increase access to economic opportunities.	It partnered with an affordable housing site and a workforce development program. However, there was no partnership with the local schools or public transit agency.	The mobility program struggled to reduce people's barriers to access, especially for people without bank accounts and smartphones.	The program evaluated the quantitative impacts of this program on air quality, safety and access to opportunities.
3. How does the program deliver intentional benefits?	The goal is to prioritize funding to a disadvantaged Black community that has consistently missed out on previous funding opportunities.	Low-income residents receive a discounted fee to use the mobility service. However, this discount alone was not sufficient to reduce other barriers to accessing the service.	The residents co-developed an anti-displacement plan to prevent this program from creating unintended burdens.	The program hired a university as a third party evaluator. However they were not culturally competent and did not understand how to incorporate racial equity metrics.
4. How does the program build community capacity?	There were no explicit goals around funding technical assistance and capacity building for the community during development and deployment of the program.	The program did resource a local community-based organization to conduct the outreach and engagement.	The program uplifted and strengthened existing community assets by partnering with local businesses and the community gardens.	The university did not build the capacity of the community. There was no budget to pay and train residents to collect, analyze and visualize the quantitative data.
5. How is the program community-driven?	To limit corporate influence of mobility companies, the goal is to ensure that the community advisory committee has the ultimate decision-making authority.	Residents sparked the idea for this program, co-developed and were compensated to take the community mobility needs assessment survey.	The outcomes of the program generally meet the community-identified mobility needs. However, the mobility company did not engage the community in selecting the mobility hub sites or the user fees.	Some residents' feedback was collected through user surveys. However there was not a transparent process to understand how this was used to improve the mobility program.
6. How does the program establish paths toward wealth-building?	The goal is to partner with a mobility company to establish a workforce development program, but there were no goals around fair labor practices or contracting with Black-owned businesses.	The program hired youth to conduct outreach, education and engagement regarding the program.	The program led to a clean mobility technology workforce training and development program with 20 participants.	While the university was hired, no local community-based organization was hired to conduct a qualitative evaluation by conducting interviews.

Moving Toward a Higher Standard of Equity

Conducting an equity evaluation or completing this worksheet is simply the starting point to understand how equity is applied in a comprehensive way. The real work involves consistently taking the steps to address gaps and move toward a higher standard of equity. Progressing toward the more transformative equity approaches is not easy, and inevitably will run up against many bureaucratic and legal barriers. This will require partnership with impacted communities and equity experts. However, the vast majority of the approaches listed in this methodology were sourced from real-life mobility programs, have been done before, and are certainly achievable with the help of people who are willing to put in the work. These elements lay the critical foundation to enable government and communities to work together to dismantle structural racism and social injustice, in order to deliver more meaningful equity outcomes.

Best Practices and Recommendations

This section distills the conclusions and recommendations that emerged from the case studies described in detail in the section following. See the case studies themselves for detailed discussion of particular programs and the equity issues involved.

Best Practices for Clean Mobility Equity Program Design

We conducted a qualitative equity evaluation of a selection of clean mobility programs. Common themes arose that apply across a wide variety of programs. The best practices derived from the case studies and highlighted here are geared toward a wide variety of clean mobility equity programs and fall into two overarching categories: 1) equity, and 2) program administration. See the case studies and appendix for more detail and context.

Advance Equity in Clean Mobility Programs

As outlined in our Greenlined Economy Guidebook,[50] we have developed six standards for equitable investment that govern funds and programs intended to address inequity. These standards are intended to address the failures of equity in our current models of investment, because without clear standards, we end up reinforcing the structures that caused problems in the first place. These six standards apply to a variety of actors, including public agencies, mobility companies, community-based organizations and other stakeholders. The standards include specific examples that serve as the building blocks to developing equity-centered mobility programs. Taken together, a program administrator can adopt these examples to develop a comprehensive mobility program that meaningfully advances equity.

1. **Emphasize Anti-Racist Solutions**

   As noted above, racist policies like redlining,[51] highway construction[52] that segregates communities of color, and urban renewal[53] created stark racial disparities in transportation and disproportionate air pollution in communities of color. The best practices below address underlying inequities with anti-racist solutions that target and prioritize the most impacted communities, centering anti-racist approaches in internal planning, power and decision-making.

   Best Practices from Case Studies:

   i. Develop mobility equity policies, programs and pilots that prioritize investments in communities and demographics who have been harmed most by systemic racism.

      a. Set investment targets and defining criteria to identify the highest need communities.

      b. Ensure that race is included as a key indicator to target investments based on need—mapping tools like CalEnviroScreen (CES 3.0)[54] should not be race-blind.

   ii. Identify and challenge structural racism, power, privilege and implicit bias within the internal policies and organizational and leadership structures of government agencies or program administrators. This includes the hiring, promoting, retention and representation of people of color in managerial or executive roles as well as governments' external approaches to how they interact, partner and share decision-making power with communities of color.

2. **Prioritize Multi-Sector Approaches**

Programs may be siloed, but problems are not. These best practices prioritize mobility approaches that provide co-benefits by addressing multiple issues and sectors at once, such as outreach, engagement, capacity-building, wealth-building, climate adaptation, anti-displacement and more, because piecemeal approaches do little to foster transformative systems change.

Best Practices from Case Studies:

i. Seek partnerships opportunities with community health care clinics, community colleges, workforce development centers, affordable and transitional housing sites, re-entry/anti-recidivism programs, substance abuse and domestic violence programs and more.

ii. Require clean mobility programs to integrate approaches beyond greenhouse gas reduction, improved air quality or vehicle-miles-reduction to provide a holistic approach to improving mobility. Approaches include sustainable land-use patterns, use of vehicles during off times for community needs (grocery shopping) and emergency response (mobility for evacuation, backup battery power to buildings), improved active transportation infrastructure (bike lanes, sidewalks), workforce development and quality jobs.

iii. Combine program outreach with other services such as assisting low-income residents with getting a bank account or credit card, obtaining a low-cost cell phone or obtaining health care or employment. For more information, refer to the Our Community Carshare program below.

iv. Develop a streamlined and coordinated outreach and application process for the many overlapping incentive programs for electric vehicles, solar power and other related programs. Require that all complementary programs be designed from the beginning with coordinated approaches and applications, applying a consistent racial equity lens. For more information, refer to the Access Clean California program below.

3. **Deliver Intentional Benefits**

These best practices focus on how to ensure that, rather than expecting benefits to trickle down to communities, programs can ensure they go directly to the people most in need in the most impactful ways, while not increasing or creating new burdens.

Best Practices from Case Studies:

i. Take the time to have internal and external conversations with a wide variety of stakeholders to define equity in a clear and specific way, identify the priority populations, understand how equity fits into the program, how to build accountability into the program guidelines, and the program's intended benefits for residents and program participants. For more information, refer to the Sustainable Transportation Equity Project below.

ii. Use a targeted universalism[55] approach to all mobility programs to "set universal goals that are pursued by targeted strategies based upon how different groups are situated within structures, cultures and across geographies to obtain the universal goal." Breaking down barriers for the highest-needs populations requires more resources and focus, while casting too wide of a net will water down the emphasis on the hardest hit communities. Designing a program to be accessible to those with the highest barriers will ensure that all will benefit.

iii. Deliver benefits that meet the needs of different residents in a community. For example, instead of just offering financial incentives for the purchase of an electric vehicle and the installation of a home charger, also offer financial incentives toward an electric carsharing or bikesharing membership, public transit voucher, prepaid charging station card or another option. For more information, refer to the Clean Vehicle Assistance Program and Our Community Carshare below.

iv. Avoid unintended consequences of direct investments into low-income communities of color by requiring the development of community-driven anti-displacement strategies. For more information, refer to the Sustainable Transportation Equity Project below.

4. Build Community Capacity

Because long-term disinvestment and discriminatory policies can erode a community's capacity for leadership, technical expertise, organizing or political capital, these best practices focus on how programs can prioritize capacity-strapped communities by building in and requiring technical assistance, long-term training and skills development. This should include contracting mechanisms to pay residents, community-based organizations and local leaders for their participation.

Best Practices from Case Studies

i. Sufficiently fund capacity building and technical assistance for under-resourced communities in the planning, application, implementation and evaluation of clean mobility programs. Capacity building and technical assistance should be both offered broadly and tailored to serve communities most in need. For more information refer to the Clean Mobility Options Voucher Pilot Program below.

   a. Technical assistance must be a bottom-up, proactive approach that's prioritized on a needs basis and baked in throughout each phase of programs.

   b. Technical assistance providers must be evaluated for their effectiveness at alleviating the burdens of organizations and communities who would not normally be able to compete for grants.

ii. Partner with universities to provide extension resources and technical assistance to community-based organizations. For more information, refer to the Ecosystem of Shared Mobility in the San Joaquin Valley below.

iii. Partner with and pay community groups to design a targeted, grassroots approach to outreach and marketing and coordinate with existing community events and services.

iv. Instead of asking applicants to start from scratch, refer them to existing tools and resources[56] for sample project development tools such as a needs assessment, mobility case studies, a mobility equity primer, community-driven planning tools,[57] and a directory of clean mobility service providers who are willing to collaborate on projects. Provide sample documents to applicants for writing a project narrative, budget, etc., and provide a template for grant reporting to speed up the process. For more information, refer to the Clean Mobility Options Voucher.

v. Create a network for applicants and awardees to provide capacity building and technical assistance and lessons learned to each other. Participants must be compensated to devote their time to this effort and this should be coordinated within similar efforts across other networks to avoid duplication.

5. Be Community-Driven At Every Stage

Truly community-centered investment requires lifting up community-led ideas and sharing decision-making power, so these best practices address how to make community members and organizations part of every phase of the program or policy.

Best Practices from Case Studies

i. Instead of creating a blanket statewide solution to clean mobility equity, develop statewide programs that foster an understanding of individual community-level needs. For more information, refer to the Sustainable Transportation Equity Project below.

ii. Involve stakeholders in the design and development of the program to vet the details to ensure that it meets the needs of all applicants and communities. When designing community-driven programs, conduct targeted outreach to communities that lack a history of being part of community-driven approaches, to help them overcome these barriers. Communities that regularly practice community-driven approaches may have a stronger network of community partners with greater capacity, and therefore disproportionately win competitive grants. For more information, refer to the Sustainable Transportation Equity Project below.

iii. Build off of existing, community-trusted mobility programs that already have community buy-in and support. Instead of creating a brand new program that requires additional outreach and implementation, funding can simply help to reduce the emissions of existing programs. For more information, refer to the Agricultural Worker Vanpool Pilot Project and Green Raiteros below.

6. Establish Paths Toward Wealth-Building

The best practices below address the racial wealth gap, which continues to grow today. In addition to cost savings, clean mobility programs must create jobs, workforce development and training opportunities, protect workers from exploitative labor practices, and help communities build assets and economic infrastructure.

Best Practices from Case Studies

i. Require transformative elements that build wealth in community such as:

   a. Workforce development and training components, particularly with youth, communities of color, and re-entry populations, and providing career pathways to the green economy;

   b. Prevailing wages and fair labor standards;

   c. Contracting with women and minority-owned businesses;

   d. Encouraging entrepreneurship and the development of community-owned mobility services;

   e. Rules stating that in the case of a program or project being discontinued, the grant-funded mobility assets (i.e. electric cars, bikes, etc.) are transferred to community partners at no-cost;

   f. Compensating residents for their time and expertise when assisting in conducting outreach and engagement.

   g. Tracking how mobility programs are benefiting low-income household wealth.

ii. Develop strong relationships with labor groups in order to establish a workforce development pipeline to train and license electricians to install electric vehicle systems.

iii. When conducting outreach and engagement if funds are restricted, subcontract with community-based organizations to partner on engagement and to distribute the stipends to participating community members. For more information, refer to Clean Mobility in Schools below.

Program Administration of Clean Mobility Programs

While the previous recommendations and best practices explicitly focus on equity, ensuring that they are actually adopted requires effective, efficient program administration. Every case study found significant challenges with program administration. Stakeholders highlighted the following best practices as the most critical strategies to administer programs in a way that uplifts rather than impedes equity.

1. **Administration And Guidelines**

   Supporting the equity recommendations listed above begins with upholding equity throughout the program guidelines and in the way that programs are administered.

   ### For Program Administrators

   i. Hiring an external program administrator team outside of the government agency may be helpful under certain circumstances, particularly when many grants are distributed and when extensive technical expertise and capacity building are required. This may help expand the capacity of program administrators to deliver more individualized assistance to applicants. This team must:

      a. Hold a diverse range of strengths, with deep and clearly demonstrated experience in equity, project management, mobility business planning, social work, community organizing, outreach and technical assistance.

      b. Reflect the community they serve, with a significant proportion of the team who are multilingual particularly those conducting outreach and engagement.

      c. Be evaluated by a third party who can continuously interview community partners to assess their impact, effectiveness and identify potential improvements.

   ii. For all grants, offer debrief sessions for all applicants who did not receive funding and help them identify alternative funding sources. This helps applicants understand why they did not receive funding and how to improve future applications.

For Program Guidelines

i. Before funding the implementation of a mobility pilot or service, require and fund community engagement and a needs assessment (or use a suitable needs assessment that already exists). Be sure to review the details of this requirement with community-based organizations to ensure it will have the intended benefits and not create a new roadblock to participation.

    a. To streamline this, create a standardized needs assessment template while still allowing aspects to be augmented based on community needs.

ii. Within a suite of programs, creating different sized grants or vouchers for different purposes, so that communities seeking small grants don't have to compete against those applying for large grants. This strategy may even apply within one specific program.

iii. When reviewing applications, create a clear equity scoring rubric and a review panel of equity and community engagement experts—preferably people who are not also on the same program administrator team.

For Application and Reporting

i. Simplify application and reporting to get funds out quickly and streamline the process.

For the Evaluation and Evolution of Programs

i. Develop a standardized equity evaluation and require programs to use it. This may include:

    a. Recognizing that measures of success will look different across communities. To accurately evaluate success requires both quantitative and qualitative metrics developed in a community-driven and community-defined way.

    b. Hiring a third party to evaluate programs, program administrators and technical assistance providers.

ii. Following program evaluation and public feedback, adapt programs based on what is and is not working in a transparent way. Don't just continue to do the same thing year after year.

iii. Based on the program evaluation, concentrate funds into those programs that are proven to provide equitable and effective outcomes; don't waste money on programs that have not proven themselves to be effective.

2. **Technology And Infrastructure**

Clean mobility technology and infrastructure already faces complex challenges. These challenges are magnified in low-income and rural communities that have historically faced disinvestment and neglect, and therefore often have severely degraded infrastructure. Overcoming these barriers requires specific attention and tailored strategies.

Best Practices from Case Studies

i. To avoid technical delays and ensure all are on board, invite relevant stakeholders like utilities and charging station companies to join the grant applicant team as technical advisors.

ii. Begin with the permitting and installation of electric charging infrastructure to prevent these logistics from delaying an entire project.

iii. Designing programs to be flexible and adaptable in the face of extremely degraded electrical infrastructure and limited cell service that exists in many rural and low-income communities. Certain technologies like electric charging and app-based carsharing may not be feasible in some areas, so programs should allow alternative mobility options or platforms to meet needs.

3. **Budget And Funding**

Programs must be designed to remove barriers and streamline budget and funding processes, or else this can greatly limit which communities are able to apply for and win grants. More specific recommendations on long-term funding sources and financial sustainability models for clean mobility programs and pilots will be included in a follow-up report.

Best Practices from Case Studies

i. Co-fund and collaborate on mobility projects and programs with government agencies across sectors and between various levels of government (e.g. federal, state, local, transit agencies, regional metropolitan planning organizations, etc.)

   a. Ensure that dollars do not just narrowly fund emission reductions but also promote transportation and workforce development.

   b. Understand how the project fits into local, regional clean transportation goals and create a vision that complements other investments to support multi-modal solutions.

ii. To avoid cash flow issues to under-resourced communities, ensure that grantees and subgrantees can receive advance payment instead of having to wait for reimbursement.

iii. Develop a sustainable financial model of funded programs from the very beginning to ensure they can continue past the initial grant.

iv. Adapt and change funding allocation and structures based on changing conditions and community needs.

Recommendations

Overarching Recommendations

While the clean mobility equity programs included in this report represent some of the most innovative equity approaches to date, all of these programs still have a long way to go to be considered transformative equity programs. Yet given the wide variety of programs, some programs are much further along than others, as this report outlines. We found those programs that have a comprehensive mobility equity approach driven by local communities' needs perform the best when it comes to equity and should be expanded. We also learned that piecemeal approaches and those that have a limited focus or no focus on the people who face the most barriers are less effective and need immediate reform. Finally, programs that continue to entrench our dependency on single-occupancy vehicles must be phased out.

1. **Immediately increase funding in California and scale nationally programs that comprehensively approach mobility equity and are led by communities such as the Sustainable Transportation Equity Project.**[58]
    i. California has developed community-driven clean mobility equity programs in which residents decide which transportation modes work best for them. Yet compared to other programs, these are insufficiently funded and cannot meet demand. State and federal funds must support mobility programs that holistically reduce greenhouse gases, air pollution and vehicle miles traveled while prioritizing the needs of low-income communities and communities of color. We must prioritize, replicate and scale community-driven clean mobility equity programs.

2. **Institute structural reforms to interagency coordination and funding to maximize available resources for clean mobility investments and to target them to the people with the most barriers.**

   i. California has multiple state agencies pushing forward their own clean mobility programs and investments—all with varying approaches to equity. For example, California's Air Resources Board and Energy Commission both offer electric vehicle incentives and electric school bus replacement programs. This has led to duplication and inefficiencies. We need a coordinated federal and state strategy that ties together all of these efforts and maximizes available resources and efficiencies.

   ii. Our limited available electric vehicle incentives should solely be targeted to the people who face the most barriers to access. The Clean Vehicle Rebate Project[59] has been allocated hundreds of millions of dollars over the years, yet it disproportionately benefits[60] middle and higher-income White people. Our limited federal and state funds should instead be designated for more equitable programs like Clean Cars 4 All[61] and the Clean Vehicle Assistance Program[62] that are designed to reduce transportation disparities, not widen them.

3. **Phase out programs that continue to entrench our dependency on single-occupancy vehicles.**

   i. California has disproportionately funneled dollars into the programs that subsidize electric vehicle purchases, yet this is not sufficient[63] to solve the climate crisis. Governments at all levels should still continue to facilitate a transition to vehicle electrification focusing on the people who face the most barriers to access, but in the long run must foster policies that reduce congestion, vehicle trips and unsustainable land use patterns. While some regions are indeed inherently more car dependent, in these areas state and federal funds should fund programs that reduce the need for costly car ownership, such as Our Community CarShare,[64] Green Raiteros,[65] Ecosystem of Shared Mobility,[66] the Agricultural Workers Vanpool Project,[67] the Rural School Bus Pilot, and more.

Policy Recommendations

The following policy recommendations will help to advance equity within California's clean mobility programs, and incorporate broad principles that could be adopted anywhere policymakers seek to promote equity in clean transportation. They surfaced during multiple stakeholder interviews and generally apply across most programs included in this evaluation—and many are also applicable to other California mobility programs not included in our evaluation.

Policy Recommendations For The California Legislature

i. Public funds from states and the federal government should be vastly increased and prioritized to improve access to clean mobility for the populations who face the biggest barriers to adopting this technology. As such, the Legislature should direct the California Air Resources Board to repurpose all of the Low Carbon Transportation Investments[68] toward equity programs that specifically target disadvantaged, low-income and tribal communities.

ii. Change the Greenhouse Gas Reduction Fund's[69] current annual appropriation for the discretionary funds to a three-year funding cycle in order to provide more long-term fiscal certainty for all programs, including CARB's mobility equity programs. This will allow programs to secure multi-year funding and appropriately plan for program administration.

iii. Allow statewide administrators and other grantees to provide advance payment to their subgrantees. This current restriction limits the ability of under-resourced cities and community partners to participate in programs, as many are unable to front the money and wait for reimbursement.

iv. Identify existing policies and practices in the state that contribute to, uphold or exacerbate racial disparities and develop proposals to address these disparities, including repealing Proposition 209,[70] which bans government institutions from considering race when targeting resources and investments. This impedes their ability to effectively amend environmental racism and disproportionate pollution in communities for color.

v. To ensure that hard-to-reach populations can participate in community engagement efforts, allow public funding to be used for childcare, translation/interpretation, stipends, transportation, food and digital marketing (e.g. texting and social media) as part of project costs for outreach and engagement.

vi. Work with stakeholders to identify a more reasonable expenditure deadline for funds in California, to allow more generous and realistic timelines. Equity projects require longer timelines because they need deeper community engagement and face more barriers because they often test new, innovative concepts. Too short a timeline for expenditures can impede the ability to effectively implement equity projects in a thoughtful and thorough way.

Policy Recommendations For California State Agencies

i. State agencies must increase overall funding of clean mobility equity programs that explicitly prioritize disadvantaged, tribal, and low-income communities. While some programs devote 100% of their funds to priority populations, other programs do not—leaving lots of room for growth to make more meaningful investments.

   a. Current law[71] requires that 35% of funds go to these priority populations, but state agencies can and should use their discretion to surpass this, raising the threshold to 100%.

ii. Ensure that coordinated outreach and application processes such as those used by Access Clean California[72] are a formal program requirement for individual climate and transportation equity incentive programs going forward, particularly for programs that have clear overlap with existing programs in terms of geography, technology and proposed beneficiaries. A lack of coordination has been shown to cause inefficiencies and consumer confusion.

iii. State agencies and local and regional agency partners should cooperate to develop complementary approaches to co-fund clean mobility equity programs. Various agencies have developed and funded similar but separate programs and projects when synchronizing their efforts would be more effective. That way if one agency cannot fund a project, another agency may be able to step in.

iv. CARB must reform the Clean Vehicle Rebate Program, and has the authority to enact the following (note that these recommendations can also be dealt with through legislative action):

   a. Target this program strictly at low-income consumers who face the greatest barriers to adopting electric vehicles.

   b. Expand the ability of consumers to receive the rebates immediately at the point of purchase.

   c. Analyze the sunset date to retire the Clean Vehicle Rebate Program in the long term as California becomes less car dependent.

vi. Allow more flexibility for programs to manage their own budgets and timelines. Equity programs often require greater resources, capacity and longer timelines to deliver on their goals.

   a. Allow more flexibility around the budget caps for administrative costs, particularly for programs that require significant staffing and case management.

   b. Allow projects the flexibility to adjust their funding timelines as grant administrators determine necessary, to allow for full expenditure of grant funding and to ensure success.

vii. With respect to funds awarded to federally recognized tribal governments, state agencies should remove the requirement to submit a limited waiver of their sovereign immunity for purposes of contracting in cases where a waiver is not explicitly required by statute. This creates an unnecessary administrative burden and barrier.

CASE STUDIES:

Equity Evaluations of Clean Mobility Programs

California's clean mobility programs and pilots have rapidly expanded in the last few years and have evolved considerably from the early days of simply subsidizing consumers' purchases of electric vehicles. The Greenlining Institute has also evolved our approach and advocacy as the clean transportation landscape has evolved, shifting from a simple focus on increasing electric vehicle access[73] for low-income people of color to a more comprehensive mobility approach[74] with the goal of moving more people, not more cars. Some state agencies have also followed this evolution and are more intentionally centering both mobility and equity in the clean transportation investments.

Greenlining has participated in the development of many of the programs included in this report, and others were born as a result of our participation in passing legislation, legal proceedings, settlement agreements and direct advocacy. Additionally, as stakeholders we have engaged in the development of many of the program guidelines and in some cases have served as high-level program advisors during implementation.

Initially, we evaluated 21 different programs. We selected these programs because of their equity commitments, and we evaluated their effectiveness at actually delivering on those equity intentions. Following this, we chose to narrow the scope and highlight 12 case studies that best illustrate how equity shows up at a high standard consistently throughout. Within each case study, we point to the equity approaches that embody our Six Standards for Equitable Investment. We did not highlight the other case studies because they had minimal equity embedded into them, although we recommend that they move forward with continuing to add more equity design into their design. Other California clean mobility programs that take a similar approach to equity could have been included, but the programs selected provide a good overview. The overarching recommendations and equity evaluation methodology used here can be applied to other existing or future clean mobility programs.

California Air Resources Board's Clean Mobility Equity Programs

The California Air Resources Board[75] is the state's lead agency for responding to climate change and air pollution. Early on, most funding was specifically allocated to subsidizing electric vehicles and deploying electric carsharing and charging infrastructure. Over time, CARB listened to the feedback of advocates and stakeholders who argued that a car-centric approach—even an electric one—was not only insufficient, but was unsustainable and inequitable. Over time, it also became apparent that while CARB's clean mobility investments were certainly reaching larger communities, they were not designed to be accessible to smaller, rural and tribal communities.

In response to years of advocacy by stakeholders, CARB has gradually developed a wider variety of clean mobility programs that are beginning to address the barriers for hard to reach communities. This section uplifts eight programs across various urban, suburban and rural geographies. These include the Sustainable Transportation Equity Project, the Clean Mobility Options Voucher Pilot Program, the Carsharing and Mobility Hubs at Affordable Housing, the Clean Mobility in Schools Pilot Project, Our Community CarShare Pilot Project, the Agricultural Workers Vanpool Project and the Ecosystem of Shared Mobility in the San Joaquin Valley.

> "Looking back at our programs over time, all of them would have benefited from an initial community mobility needs assessment – and now that's becoming the standard. It's the only way to make sure that projects are sustainable, have high adoption rates, and are meeting multiple diverse mobility needs across the state."[76]
>
> – California Air Resources Board

This section also highlights some of the most cutting-edge programs to date that center around resourcing marginalized communities to decide for themselves which types of mobility options best meet their needs. **Some of the most innovative programs are intentionally flexible with what they can fund—recognizing that communities don't just need a mobility service, they also need funding for surveys, outreach, capacity building, technical assistance, workforce development and more. This change in mindset has moved CARB away from simply funding individual mobility projects and toward funding more holistic approaches to what communities require as a whole to be sustainable and equitable.**

This evolution represents a significant shift in mindset in a relatively short amount of time. However these more equitable programs are still in their very early stages and it may take years to fully realize their benefits. Despite this, our equity evaluation has managed to highlight clear gaps and areas for improvement.

Sustainable Transportation Equity Project

I. Description

The Sustainable Transportation Equity Project[77] (STEP) funds two types of grants: 1) Planning and Capacity Building Grants to fund the groundwork to identify residents' mobility needs in disadvantaged and low-income communities, and 2) Implementation grants to fund community-driven projects in disadvantaged communities that have been co-designed with residents to address their needs and historic inequities. To receive implementation funds, STEP requires the submission of an existing community mobility needs assessment to ensure that project outcomes remain community-driven, meet diverse local mobility needs across the state, and that programs have high adoption rates. Some examples of eligible costs include infrastructure, zero-emission vehicles and other mobility options, land use and pricing innovations, community engagement activities, staff time for operating services, and more. **This project is unique in that it takes a more holistic approach focused on vehicle miles traveled reduction and sustainable land use patterns, as opposed to simply pollution and emission reduction.**

CARB is the sole administrator of STEP as it was designed for larger projects in communities that have already completed the pre-work of needs assessments and engagement. However, Estolano Advisors[78] have been sub-contracted to provide technical assistance to all STEP applicants and recipients.

Program Type:
Clean Mobility Equity Pilot

Eligible Uses:
Infrastructure, zero-emission vehicles and other mobility options, land use and pricing innovations, community engagement activities, staff time for operating services, and more.

Equity Evaluation:
Throughout its mission, process, outcomes, measurement and analysis, STEP consistently integrates equity approaches that primarily lean towards a transformative approach.

Location:
Statewide

Funding Agency:
California Air Resources Board

Program Funding:
$19.5 million available in Fiscal Year 2019-20

Administrative Team:
California Air Resources Board

Grants Awarded:
8 Planning and Capacity Building awardees
3 Implementation awardees

Years of Operation:
2020-present

This application period for STEP only launched in mid-2020, yet there has already been huge demand for this program. This year there were 34 total applicants from a wide variety of community-based organizations and cities from across the state, requesting a total of $108.9 million—five and a half times the amount available. Of those 34 proposals,[79] eight communities were selected for the planning and capacity building grant and three communities were selected for the implementation grants. Clearly communities across the state are ready and eager to conduct this level of community-driven transportation planning and decision-making, yet there is a severe shortage of state funding to meet the need.

II. Equity Evaluation

1. Equity in the Mission

a. Emphasize Anti-Racist Solutions and Deliver Intentional Benefits

Compared to other programs, STEP has a particularly robust and intersectional definition of transportation equity that was co-created through stakeholder engagement: "When a community's transportation system provides accessible, affordable, environmentally sustainable, reliable and safe transportation options to all residents, in particular those that have been disproportionately impacted by pollution or lack access to services." The stated purpose is to increase transportation equity in low-income, disadvantaged and tribal communities throughout California. While state restrictions prevent STEP from taking an explicit anti-racist approach by targeting benefits to communities of color, it does still target 100% of its funds to the communities most burdened by pollution and other socioeconomic factors, which most often are communities of color.[80] Overall STEP's mission represents a relatively advanced equity approach compared to other programs.

b. Prioritize Multi-Sector Approaches

Beyond just funding a wide variety of potential transportation projects, STEP states that "transportation equity is intrinsically linked to access to economic opportunities and occurs when community residents have the power to make decisions about their transportation systems." This makes it clear that this program's mission intends to have impacts across sectors. This statement goes farther than most because of the clear connection between transportation equity and community power and decision-making. STEP also encourages applicants to leverage other types of funding from other state agencies.

2. Equity in the Process

a. Be Community-Driven at Every Stage

STEP was able to foster an advanced approach to equity before finalizing the design and guidelines of the project. CARB staff conducted outreach and accepted feedback from priority populations, community-based organizations, cities and transit agencies, and other state agencies in the development of the program guidelines. This outreach approach went well beyond simply informing stakeholders about the program, and instead took a much more collaborative and equitable approach over a period of a few months. CARB took time to have many conversations with stakeholders to understand exactly how equity will fit into the project and how to build accountability into the program guidelines. Staff responded line by line to each stakeholder's public comments about the STEP guidelines to ask follow-up questions and to reply with an indication of whether the feedback would be accepted.

Involving stakeholders in this way helped to ensure that the details worked for all applicants and communities—because even one relatively small requirement could be the reason that an entity can't or doesn't apply. This community-involved process proved to be an effective way to capture accurate feedback, incorporate additional equity approaches, and build relationships with stakeholders—all before STEP was officially launched. These outreach strategies should serve as a standard equity approach for any agency creating new programs.

Teams of applicants are required to define a Partnership Structure,[81] which includes elements such as 1) how the governance and decision-making structures will center the voices of community residents, 2) how community feedback and engagement will be incorporated, 3) how the structure will address potential inequities between the partners, and 4) the financial structure of the partnership. This builds a solid foundation for partnerships with accountability guardrails to keep programs equitable and community-driven. This type of equity practice is not common in grant programs, and is a strong model that should be replicated widely.

b. Build Community Capacity

STEP encourages cross-sector community partnerships between cities, community-based organizations and other community stakeholders to collaborate as applicant teams. This represents a particularly advanced equity approach that can help seed long-term trusting relationships, uplift the expertise of community leaders and residents, and legitimize community groups for future projects.

This program has allocated funding to Estolano Advisors to provide capacity building and technical assistance, to ensure that applicants have the tools and resources they need to submit competitive applications. This is important because the application is quite complex and requires applicants to develop detailed project proposals that describe how they will meet community needs, how they will advance transportation equity and much more.

CARB staff also offered debrief sessions for all applicants who did not get funding to help them understand why and to help identify alternative funding sources. This critical follow-up step represents a best practice designed to ensure that applicants are being set up for success to submit more competitive applications in the future.

3. **Equity in the Outcomes**

   a. **Prioritize Multi-Sector Approaches**

   While this program is still in very early stages, based on the awarded proposals,[82] future outcomes will take a multi-sector approach. Naturally there will be a wide variety of projects that will advance transportation equity and reduce emissions and vehicle miles traveled, such as zero-emission buses, electric bikes, bike lanes, community-based tree planting and a Universal Basic Mobility Pilot Program that will expand integrated fare payment subsidies across mobility options. STEP also requires interlocking plans for climate adaptation and resilience, workforce development and anti-displacement. This is particularly important, because regardless of whether the investments and benefits in low-income communities of color are community-driven, programs need an anti-displacement plan to avoid any unintended consequences.

   Establish Paths Toward Wealth Building

   Based on the implementation funds awarded, future outcomes in workforce development will also include partnerships with community colleges and trade schools. For example, this will result in full-time jobs and training for 10-20 youth to support the siting, installation and maintenance of electric vehicle charging stations. Additionally, the Fresno Metro Black Chamber Foundation will develop an apprentice program for electric shared mobility operations in the City of Stockton. Compared to other programs that do not require a workforce development component, STEP's wealth building outcomes are significantly more robust.

4. **Equity in the Measurement and Analysis**

   For applicants who receive funding, CARB requires reporting[83] on the project's benefits, such as greenhouse gas and air pollutant emission reductions, passenger vehicle miles traveled reductions, travel cost savings, energy and fuel cost savings, and jobs supported. In addition to just quantitative data, STEP requires collection of qualitative user or participant data through surveys or other methods, which represents an advanced approach to embedding equity into the evaluation methods. This qualitative data will help shine light on the nuances of the equity impacts, who truly benefits and what those benefits look like. Given that STEP is still in its early stages and there is not yet more clear data, there will be a need to continue to evaluate this project as it matures.

a. Be Community-Driven at Every Stage

Additionally, as part of an effort to identify the preferred methods to evaluate CARB's variety of clean mobility projects, UC Berkeley researchers will be 1) identifying indicators and metrics, 2) conducting an equity evaluation of the projects, and 3) releasing policy recommendations to inform future rounds of funding. STEP, among others, will be included in this evaluation. **One of the goals of this research is to identify what "success" means to each community individually and how to develop metrics that can be used to evaluate community-defined success. This is critical, because success cannot be measured uniformly across the board—particularly because equity programs may need to be designed and implemented differently in order to better meet the needs of residents.** Community partners and equity experts were involved in co-creating the scope of work, conducting an equity readiness assessment of the researchers, and will serve as paid advisors for the duration of the evaluation. Compared to other programs and projects, this approach to measuring and analyzing equity represents one of the most inclusive and community-centered methods to date. For more information on co-creating research and evaluations with community partners, refer to Greenlining's Making Racial Equity Real in Research[84] report.

Recommendations for the Program Administrator

1. Lengthen timeline for applicants and awardees to develop and implement plans.
2. Evaluate project eligibility requirements (e.g. continuous geographic area, match funding) to ensure they actually reflect the needs of the communities they intend to support.
3. Evaluate technical assistance providers' ability to build community capacity, develop community-driven projects and advise project implementation
4. In future rounds of funding, expand project eligibility to all tribes, not just federally recognized tribes.
5. In future rounds of funding, expand Implementation Grants to low-income communities, given that the Planning Grants are available to them. However, this must be accompanied by increased funding so as not to make the program more competitive.

Clean Mobility Options Voucher Pilot Program

I. Description

The Clean Mobility Options Voucher Pilot Program[85] funds zero-emission carsharing, carpooling, vanpooling, bikesharing, scooter-sharing, innovative transit services and ride-on-demand services. The first round of funding operated on a first come, first served basis as opposed to a competitive grant. This program funds both 1) planning grants (i.e. mobility needs assessments) and the implementation of projects. **A unique feature of this program is that applicants need to demonstrate that the clean mobility projects proposed are community-driven and based on direct engagement with community residents.**

Because the program was designed to distribute many smaller grants and provide widespread technical assistance and capacity building, CARB made the decision to experiment with hiring a third-party program administrator team to manage Clean Mobility Options. Other CARB programs like STEP that distribute only a few large grants, can be more easily managed by CARB staff. The program administrator team includes CALSTART[86] and Shared-Use Mobility Center[87] in partnership with GRID Alternatives[88] and the Local Government Commission.[89] This team brings a multi-sector approach and diverse skill sets, expanding their ability to build the capacity of communities to undertake the planning and implementation of their own clean mobility equity program. While it remains relatively early to determine the effectiveness of this program administrator team, it is critical to evaluate such teams' success at developing and delivering on equitable processes and outcomes.

Program Type:
Clean Mobility Equity Pilot

Eligible Uses:
Zero-emission carsharing, carpooling, vanpooling, bikesharing, scooter-sharing, innovative transit services, ride-on-demand services, planning and community engagement activities and more.

Equity Evaluation:
Throughout its mission, process, outcomes, measurement and analysis, this pilot embeds equity approaches that generally lean towards a transformative approach.

Location:
Statewide

Funding Agency:
California Air Resources Board

Program Funding:
$21.15 million available in Fiscal Year 2019-20

Administrative Team:
CALSTART, Share-Use Mobility Center (SUMC), GRID Alternatives and the Local Government Commission

Vouchers Awarded:
24 Needs Assessments awardees
Implementation awardees to be determined

Years of Operation:
2020-present

$21.15 million was allocated in the first round of funding in 2020. In 2020 there were 41 applicants and 24 awardees for the needs assessment voucher and 31 applications for the implementation mobility project vouchers (number of awardees to be determined) as of December 2020.

II. Equity Evaluation

1. Equity in the Mission

a. Emphasize Anti-Racist Solutions and Deliver Intentional Benefits

The Clean Mobility Options program guidelines clearly state that the eligible project areas for this program must be located in disadvantaged communities, low-income tribal lands, or a deed-restricted affordable housing facility in a low-income community. Based on this designation, this program generally benefits communities of color—although an explicit anti-racist goal is prohibited due to state restrictions. The administration team also instituted a $1 million cap per mobility project in an effort to target benefits toward smaller, rural projects that have had more difficulty competing against larger cities for other clean mobility equity grants. Overall, this equity approach represents a solid starting point to ensure intentional benefits to the highest need communities.

2. Equity in the Process

a. Be Community-Driven at Every Stage

Mobility service providers may not serve as a lead applicant and can only join a community-led team as a sub-applicant. This is a good strategy to keep this program driven by community interests as opposed to those of a mobility company and should be standardized across similar programs. However, in practice applications have still been submitted that are clearly driven by mobility companies who prioritize obtaining government subsidies over uplifting a truly community-driven mobility project, indicating that more safeguards may be needed.

Clean Mobility Options funds a flexible array of transportation modes and activities based on individual community needs, a strong equity approach that helps to deliver intentional benefits and foster a community-driven process. In fact, applicants are required to utilize a new or existing needs assessment and develop both a financial sustainability plan and a community outreach plan.

b. Build Community Capacity

One of this program's best practices is a tailored outreach and technical assistance approach toward hard-to-reach communities. Instead of waiting for organizations to reach out, the team proactively reached out to people who didn't know they needed help or who didn't have time to reach out. This is a particularly important strategy because while this program, among others, explicitly targets low-income tribes and disadvantaged communities, it operates in an environment of deep inequities in how clean mobility funds have been distributed across the states. Larger communities often have greater capacity and technical expertise to submit competitive applications and therefore have won a disproportionate share of state funding. The program also provides applicants with a detailed toolkit[90] that includes sample project development tools such as a needs assessment, mobility case studies, a mobility equity primer and a directory of clean mobility service providers who are willing to collaborate on projects.

Despite this wealth of resources, targeted technical assistance and a funding set-aside, some tribal communities still report facing barriers to readily accessing funds. This stems from the individual project budget cap, the infrastructure needed to conduct a needs assessment, and an implementation manual which does not fully reflect tribal qualities and assets.

c. Establish Paths Toward Wealth-Building

The guidelines include provisions stating that if a funded project is discontinued, the grant-funded mobility assets (i.e. electric cars, bikes, etc.) are transferred to community partners at no cost. This is a sophisticated equity approach that should be standardized across all programs because it helps to secure long-term community-owned assets and wealth building.

d. Additional Lessons Learned

i. Application Process

The most glaring equity shortcoming of Clean Mobility Options is the application process, in particular the first come, first served approach. This was intended to limit the advantage that the communities with more resources and capacity have in developing the most competitive applications, but has created new equity issues. The first come, first served approach requires applicants to submit their application at the exact time that the window opens and compete for the earliest timestamp. Once the submissions surpass the amount of funding available, no more applications are accepted. This application submission processing list[91] shows that the 14 projects that managed to be accepted were all submitted within the first 41 seconds of the window opening. This represents an access issue for the many applicants who put significant time and effort into developing their application, only to miss out because they may have slower internet or because they were not available at the precise time when the window opened.

After the window closes, the timestamped processing list is the order in which CALSTART evaluates the eligibility of application solely based on whether basic requirements have been met. This omits an equity-centered scoring rubric. For a program intended to embed equity from start to finish, this does not go far enough to uplift the most equitable and community-centered applications. Furthermore, as the lead of the program administrator team, CALSTART is the only team member to review the applications, which is a missed opportunity to bring together a diverse set of perspectives in the review process, particularly those with long-standing equity expertise.

In addition, the implementation manual is extremely long, technical, and has so many complicated requirements that it discourages many potential communities from even applying. This is particularly true for small communities that only needed funding for simpler projects that are not full-scale programs—and therefore cannot meet all of the burdensome requirements, such as collecting user fees. This issue of a complex application stands out because Clean Mobility Options was designed for relatively smaller projects—compared to STEP, which also has an extensive application yet is intended for larger projects.

ii. Funding

We identified two common funding administration challenges that have equity impacts: the requirement of match funding and the requirement of participants to put money up front and wait for reimbursement. Clean Mobility Options identified innovative alternatives and workarounds for both.

To broaden the pool of applicants, the program eliminated match funding. Instead of a standard cash match or in-kind contribution, applicants are only required to show that they are prepared to contribute five resources, such as staff time, donated land, relationships with community based organizations, event venues, outreach assets and more. This represents an important equity approach that should be considered a best practice because it reduces barriers for communities that may not have access to cash yet can contribute other types of assets that are equally valuable to the project.

The program requires participants to spend money up front and seek reimbursement from the state, creating a challenge for nonprofit organizations and small cities that lack the financial resources to provide money upfront. Program administrators are limited in what they can do to address this issue given that state rules restrict an advance pay option to program participants, so making this change will require legislative action. Based on public feedback, to address this barrier the program administrator developed a mechanism that allows vendors to invoice CALSTART directly for large-dollar items, shielding the community-based project lead from needing to front these costs and submit for reimbursement. The program administrator has committed to watching carefully the effectiveness of this measure and considering refinements as needed.

3. Equity in the Outcomes

Clean Mobility Options recently announced 24 Community Transportation Needs Assessment Voucher Awardees, each receiving up to $50,000 to conduct needs assessments, for a total of $1.15 million. This will fund awardees for nine months to conduct the needs assessment,[92] community engagement, write a report about their outcomes and develop an application for a future mobility project. The needs assessment awardees[93] represent a mix of urban, suburban, rural and tribal communities—with lead applicants who represent not only cities and government entities but also community-based organizations. This array of diverse awardees indicates that this program may be more accessible to under-resourced communities, particularly community-based organizations, than other standard state grant programs. As of early 2020, the awardees for implementation funds have not yet been announced, but we anticipate that the program will fund a wide variety of shared mobility projects.

a. Emphasize Anti-Racist Solutions

To better target funding to priority communities, the administration team instituted a $2 million set-aside for tribes for the implementation of mobility projects and $150,000 allocated to tribal entities for needs assessments to prepare awardees to apply for the next round of implementation funding. This is a strong equity approach that should be replicated across other programs.

4. Equity in the Measurement and Analysis

For applicants who receive funding, CARB requires reporting[94] across a variety of program benefits such as emission reduction, user surveys, travel activity, outreach and job creation.

The Shared Use Mobility Center evaluates project outcomes related to the overarching Clean Mobility Options goals of accessibility, mobility equity, and climate resilience. The evaluation process follows a Cultural Responsive Evaluation method that works with each project team to establish the best set of indicators and metrics suited to each project. This process follows each project's progress through the life of the project, culminating in a final report analyzing the impact of clean mobility projects on all participating communities. A separate, internal formative evaluation of the equity process is not clearly defined in the current program evaluation process. This process, separated from the evaluation of program goals for the projects, needs more clarity and detail on how equity will be evaluated internally, particularly from a process perspective. This is an important task; we recommend an unbiased third-party with equity expertise should always conduct internal equity evaluations.

a. Be Community-Driven at Every Stage

Lastly, similar to STEP, external researchers from UC Berkeley will be evaluating Clean Mobility Option's equity outcomes over the course of a couple years. The research will develop metrics that can be used to evaluate how individual communities' define what success looks like in the context of their projects. Given that Clean Mobility Options has only recently begun and there is not yet clear data, additional evaluation will be needed over time.

Recommendations for the Program Administrator

1. CARB should evaluate the costs and benefits of hiring a statewide program administrator and technical assistance provider to better understand when this extra capacity is needed.

2. Raise the budget cap for individual zero emission vehicles so as not to discourage applicants with limited access to capital who are interested in making large purchases like microtransit or shuttle vehicles.

3. Consider creating separate funding pots with fewer requirements/barriers to entry for communities who only need a small funding amount for a more straightforward program.

4. Shorten and simplify the Implementation Manual. Include language that uplifts Indigenous history, culture, context and contributions related to clean mobility.

5. Continue to develop tools and resources to assist applicants during the application phase and awardees during their implementation phase.

6. In the short term, immediately introduce fixes to the first come, first served application process. If this altered version does not yield more equitable outcomes, in the long term replace the first come, first served approach with a process that applicants and stakeholders identify as more fair.

7. Develop an equity-centered application scoring rubric and expand application evaluation members beyond CALSTART to include evaluators with equity expertise.

8. Instead of the program administrator conducting a self-evaluation and developing equity metrics, hire a third party with equity expertise to conduct an internal and external equity evaluation of the program and its administrators.

9. Implement a tiered program outreach and technical assistance approach. The current approach is broad and expansive, but could be targeted and prioritized on a needs basis to specific state regions to address which communities are getting left behind, particularly for tribal communities.

10. In the Implementation Manual, provide examples that speak to tribal qualities and assets, such as describing access to nature and cultural activities as an eligible mobility need.

11. Analyze the gaps in outreach and how disadvantaged communities may not have been reached due to gaps in access to technology.

Carsharing and Mobility Hubs in Affordable Housing Pilot

I. Description

The Mobility Hubs Project[95] is developing three mobility hubs at affordable housing sites in Oakland, Richmond and San Jose. Depending on the specific needs of residents, the hubs will prioritize a selection of electric vehicle carsharing, bikesharing, e-scooter sharing and transit passes to serve approximately 6,000 low-income residents.

CARB granted $2.25 million to the Metropolitan Transportation Commission, which is the lead grantee, and TransForm and the Shared Use Mobility Center as subgrantees, to implement the pilot project. The project advisory committee is made up of the Bay Area Air Quality Management District, AC Transit, Santa Clara Valley Transportation Authority and The Greenlining Institute.

II. Equity Evaluation

1. Equity in the Mission

a. Prioritize Multi-Sector Approaches

The project has multi-sector overarching goals: to reduce emissions and vehicle miles traveled while increasing access to healthcare, education, grocery stores and other services. While this represents a solid equity approach compared to other programs, it does not require a workforce development component.

Program Type:
Clean Mobility Equity Pilot

Mobility Uses:
Electric vehicle car sharing and charging infrastructure, bikesharing, e-scooter sharing, and transit passes.

Equity Evaluation:
Initially this pilot applied mostly minimum equity approaches, yet overtime it has evolved to include more transformative equity approaches in its mission and process.

Location:
Oakland, San Jose, and Richmond

Funding Agency:
California Air Resources Board

Program Funding:
$2.25 million available in Fiscal Year 2019-20

Administrative Team:
Metropolitan Transportation Commission (MTC), TransForm, and the Shared Use Mobility Center

Years of Operation:
2018-present

b. Emphasize Anti-Racist Solutions and Deliver Intentional Benefits

California law prevents the project goals from explicitly naming anti-racist goals, however the benefits of this project specifically target residents of affordable housing sites living in disadvantaged communities, who are primarily people of color. **Compared to other programs, the Mobility Hubs project represents a particularly advanced, targeted approach to deliver intentional benefits to the highest need populations because it specifically focuses on low-income residents who live within disadvantaged communities.**

c. Be Community-Driven at Every Stage

This project's initial goal was to deploy 24 electric carsharing vehicles and build out mobility hubs to increase access to clean transportation across communities. However, that initial goal was later determined to not meet the residents' needs. MTC and TransForm worked with CARB to adjust the number of cars and substitute additional mobility options, such as transit passes and bikesharing, to better tailor solutions and match them with community-identified needs. The onset of this project was rather prescriptive in its approach, as opposed to a more equitable, community-driven approach, but adjusting the project goals to be more community-driven over time in order to better meet the needs of residents represents a good practice.

2. Equity in the Process

a. Emphasize Anti-Racist Solutions and Be Community-Driven at Every Stage

The Mobility Hubs project is uniquely equity-based and community-driven because residents have been shaping the design and implementation from start to finish, beginning with the community partnership-building and mobility needs assessments. At each of the three project sites, a resident advisory group has provided feedback on the wording of the needs assessment survey. Residents were compensated for completing their survey, which was translated into various languages. This race-conscious and culturally appropriate engagement represents an anti-racist approach that helped to better reflect and address the needs of residents of color. These same advisory group members have provided ongoing feedback and helped to collect changes in community needs and travel behavior over time, furthering the importance and impact of this project from the equity perspective. **Obtaining a high response rate from the needs assessment surveys required eight months, translation, and compensation for participants**. Based on the results of the assessment, the project team determined which modes should be prioritized at the different sites based on needs and the quality of infrastructure to support clean mobility services. Overall, these strategies represent a robust equity approach to conducting a community-driven mobility needs assessment.

> "Be open and flexible about what we're asking people – do people want electric vehicles or is subsidizing public transit just fine?"[96]
>
> – Joy Massey, TransForm

b. Build Community Capacity Building and Establish Paths toward Wealth Building

Allocation of resources to pay three site coordinators, who were a combination of existing housing site employees and new hires, represents a key best practice. This not only allowed the project to run more efficiently because the existing employees already had trust with the residents, but also served as a form of deeper project integration and wealth building for the on-site coordinators. While this project did not have a specific technical assistance or capacity building component, the partnerships with local organizations like TransForm and the two affordable housing developers and one neighborhood association have served as a form of capacity building to deliver these community-driven projects. Another innovative element of the project was hiring and training residents to conduct survey outreach and data entry to conduct and compile the three needs assessments. **While workforce development was not an explicit requirement, this project took a strong equity approach to building in workforce development and capacity-building opportunities that will seed long-term skills-building for residents.**

c. Additional Challenges

i. Degraded Electrical Infrastructure

Low-income communities often suffer from severely degraded electrical infrastructure. This caused delays as additional work was needed to get the infrastructure to a basic level of service.

3. Equity in the Outcomes

As of late 2020, this project is in the early implementation stage and is readily incorporating key lessons from the needs assessment, ongoing community engagement and other initial project outcomes. One of the most noteworthy community and equity outcomes from this project has been the Community Transportation Needs Assessment Report.[97] This set a high bar for other equity projects and built from key lessons CARB staff learned through the SB 350 Barriers Report[98] development. This needs assessment, in combination with establishing paid site coordinators and resident advisory groups at each project site, has helped to establish ongoing trust and buy-in with the residents. More concrete equity outcomes will become clear as project implementation continues.

4. Equity in the Measurement and Analysis

The Mobility Hubs project requires a wide variety of data to be collected, including electric vehicle carshare usage, participant surveys, transportation patterns, auto ownership, unmet transportation needs, resident feedback on effectiveness of outreach and education materials, number of participants, and other demographic information mutually agreed upon between CARB and MTC. They will also administer a short COVID-19 travel survey to see if patterns have changed and will conduct a follow-up survey to evaluate the implementation and use of the mobility services.

a. Additional Lessons Learned

i. Framing Success

This project showed that it can be important to reframe the traditional measures of success, particularly when it comes to innovative equity programs. The needs assessment process unexpectedly took eight months, and by traditional measures this delay may have created a perception of "not successful" or "a failure." In reality, conducting such a detailed and thoughtful needs assessment requires significant time and investment. A thorough process is what made the needs assessment so successful and allowed extensive documentation of the process, which is now serving as a template for others. **Achieving success requires time to get it right, and therefore our measures of success should focus on the quality of the services provided as opposed to just speed.**

Recommendations for the Program Administrator

1. Streamline the CARB grant quarterly status reporting process and allow more flexibility in the project timeline.
2. Uphold the needs assessment[99] as a best practice and template for other equity and transportation projects.
3. Incorporate the needs assessment and critical lessons into a process to standardize these investments statewide.
4. Allocate more funding for the training of the on-site coordinators to equip them with the resources to do their job even better; promote community ambassadors to spread the message on clean transportation and mobility and increase awareness.
5. Provide technical assistance for mobility services such as identifying vendors and site readiness assessments of electrical equipment to support electric vehicle chargers.
6. Make workforce development an explicit requirement in similar and future programs

Clean Mobility in Schools Pilot Project

I. Description

The Clean Mobility in Schools[100] project supports a range of strategies to reduce emissions and vehicle miles traveled in disadvantaged communities—including zero-emission vehicles, active transportation, transit passes and zero emission landscaping equipment, plus outreach and education to familiarize the community with emerging clean technologies. **This project also enables school districts to jumpstart their electric vehicle fleets by including electrical upgrades and infrastructure support, which are particularly important to disadvantaged communities where infrastructure is especially degraded.**

During the early development of this program, it was a challenge from the state agency perspective to understand how a school district works, and whether CARB should work through a program administrator to manage the project. Ultimately CARB decided to administer the program themselves as opposed to hiring a program administrator. In 2019, CARB awarded $24 million to three school districts, and the program will be implemented over the course of four years until 2023.

Program Type:
Clean Mobility Equity Pilot

Eligible Uses:
Zero-emission vehicles, active transportation, transit passes, zero emission landscaping equipment, outreach and education, and more.

Equity Evaluation:
This project includes minimum equity approaches in its mission.

Location:
Statewide

Funding Agency:
California Air Resources Board

Program Funding:
$24 million alloted in Fiscal Year 2018-19

Administrative Team:
California Air Resources Board

Grant Awardees:
El Monte Union High School District, San Diego Unified School District, and Stockton Unified School District

Years of Operation:
2019-present

II. Equity Evaluation

1. Equity in the Mission

a. Prioritize Multi-Sector Approaches

This project's mission addresses multiple community concerns, including advancing environmental education, fostering clean mobility behavior changes, and improving the school community's air quality and public health. The guidelines[101] require the creation of a community engagement and education plan, with workforce training listed as a suggested goal. Overall this is a solid equity approach, yet requiring workforce development would secure more direct paths toward wealth building.

b. Emphasize Anti-Racist Solutions and Deliver Intentional Benefits

All Clean Mobility in Schools funds are targeted toward disadvantaged communities who suffer from the highest poverty and pollution burdens in California. While state law prohibits this project from including an explicit anti-racist mission, it is designed to deliver intentional benefits to students, parents, staff and the surrounding residents of disadvantaged communities—who are primarily people of color. This approach represents a good starting place to continue building equity throughout the entire project.

2. Equity in the Process

a. Additional Best Practices

i. Relationship Building

All stakeholders involved have noted that a positive working relationship between the school districts and CARB as a key to success to advancing this equity project. This does take time, however; these strong relationships were built during multiple working groups over the course of three years. It was also important for CARB to understand how school districts' operate differently than other government or business entities, particularly with budgets, approval processes and other various requirements. Building relationships between the school districts and the community was also critical to developing the required community engagement plan.

ii. Outreach and Engagement

As a best practice, one school district is utilizing Greenlining's Mobility Equity Framework[102] to inform how to center equity into the community engagement and educational components of their project. This is important because projects will be more effective when the outreach, engagement and education strategies reflect community needs, priorities and culture.

To avoid state restrictions on eligible engagement expenses, one school district subcontracted with a nonprofit in order to provide food, transportation, translation and other critical costs associated with equitable and inclusive community outreach and engagement strategies. This strong equity approach also serves to build the capacity of local community-based organizations and ensure that outreach and engagement strategies are culturally competent.

b. Additional Lessons Learned

i. Supporting Under-Resourced School Districts

Awardees cited construction, electric vehicle charging strategy and design, bus selection, grant writing and reporting, and baseline carbon accounting as key areas of expertise needed to apply for and implement the funds. **To get this complex application[103] to the finish line, applicants found it helpful to have a dedicated staff member who was not only able to understand the technical component, but also had the interpersonal skills to be an effective coalition builder within the school district**. Given this wide range of skill sets and expertise needed, CARB and the grantees cited that having built-in technical assistance would have been extremely helpful for applicants and grant awardees. To fill this capacity gap, school districts hired technical advisors, many of whom were familiar with CARB processes based on previous projects and therefore were able to fast-track the project both in the application and the implementation processes. Having technical experts on board for very specific issues like Vehicles to Grid Integration help applicants understand which technology would realistically work in their community. While clearly these types of partnerships helped make the grantees' applications more competitive, this may put lesser-resourced school districts at a disadvantage if they cannot afford to hire technical consultants.

To streamline the efficiency of contracting services such as electric charging, a school district utilized the practice of "piggy-backing," in which a school can piggy-back on the contract of another school, to avoid going out to bid themselves—which takes time and resources. This practice can help reduce contracting barriers for under-resourced schools.

3. Equity in the Outcomes

Three grants have been awarded to El Monte Union High School District,[104] San Diego Unified School District[105] and the Stockton Unified School District,[106] and implementation began in 2020. Projects range from services that increase mobility access like vanpooling, carsharing and transit passes, to projects that introduce new forms of mobility such as electric trucks providing food delivery to students, to infrastructure projects like vehicle-to-grid and publicly-accessible charging, as well as electric landscaping equipment and school curriculum and training regarding zero-emission technology.

4. Equity in the Measurement and Analysis

Schools will be conducting pre- and post-implementation surveys of the school communities on chosen project elements. The grant solicitation outlines standard reporting requirements,[107] such as operation and maintenance data and costs, jobs created and the number of outreach events. Clean Mobility in Schools takes this a step farther with a more in-depth approach. **CARB, along with the grantees, will develop a blueprint of their thought process and lessons learned after project completion in 2023. This will serve as a key resource for future grantees and other school districts.**

Recommendations for the Program Administrator

1. Include a community-driven planning grant moving forward, similar to STEP and Clean Mobility Options.

2. Make technical assistance available to all applicants so that schools unable to partner with technical experts are not at a disadvantage.

3. Require workforce development to be a component of applications, as opposed to just a suggestion.

Our Community CarShare Pilot Project

I. Description

The Our Community CarShare Sacramento Pilot Project[108] is an electric vehicle carsharing service currently serving seven affordable housing sites located within disadvantaged and low-income census tracts in the Sacramento region. This program, administered by the Sacramento Metropolitan Air Quality Management District, helps low-income families, seniors and people with disabilities access health care, grocery stores, employment opportunities and recreational activities. This project takes a multi-sector approach through the partnerships and combined resource contributions of affordable housing organizations, transportation service providers, a local utility company and local, regional and state governments.

In Phase I, the project received a $1.36 million CARB grant for program design and carshare launch at four sites. CARB approved $1 million in expansion grant funding for Phase 2, supporting existing sites along with three additional carshare sites and launching a Transportation Incentive Card program, which provides subsidized transportation vouchers for non-driving community residents. Our Community CarShare received $2 million in CARB grant funds for Phase 3 to further expand carshare and transportation services at three additional housing sites, incorporate e-bike sharing, and support existing sites until they become financially self-sustaining.

Program Type:
Clean Mobility Equity Pilot

Eligible Uses:
Zero-emission vehicles, active transportation, transit passes, zero emission landscaping equipment, outreach and education, and more.

Equity Evaluation:
This project includes minimum equity approaches in its mission.

Location:
Statewide

Funding Agency:
California Air Resources Board

Program Funding:
$24 million alloted in Fiscal Year 2018-19

Administrative Team:
California Air Resources Board

Grant Awardees:
El Monte Union High School District, San Diego Unified School District, and Stockton Unified School District

Years of Operation:
2019-present

II. Equity Evaluation

1. Equity in the Mission

a. Prioritize Multi-Sector Approaches

The mission of Our Community CarShare is to 1) improve mobility and transportation access for low-income residents, 2) reduce greenhouse gases and pollution, and 3) raise awareness on the benefits of multi-modal and zero-emission transportation, specifically in low-income and disadvantaged communities. This array of goals in combination with the partnerships with affordable housing organizations represents an advanced, multi-sector equity approach that seeks benefits beyond just access to mobility.

b. Emphasize Anti-Racist Solutions and Deliver Intentional Benefits

State law prevents this project's goals from explicitly prioritizing communities of color, yet the project does lean toward an anti-racist approach because it largely targets and benefits underserved communities of color, including non-English speaking residents. While this is a relatively standard equity approach across programs, nevertheless it represents a solid starting point to continue building equitable processes and outcomes throughout.

2. Equity in the Process

a. Be Community-Driven at Every Stage

This project did not initially take a community-driven approach and was solely scoped as a carshare service. However, when it became clear that many residents did not drive, the program team listened to their feedback and adapted the scope of the project to better meet all residents' needs by providing an alternative $100 a month transportation subsidy in the form of a Visa card programmed specifically for transportation merchant codes for use on public transit, ride-hailing, or bikeshare. This flexibility and adaptability based on community needs represents a strong equity approach.

Project staff took a very hands-on and comprehensive approach to outreach, education and engagement. It included the training of housing site staff, tailored race-conscious strategies for diverse and multi-lingual residents, and the pairing of additional information on obtaining a bank account or credit card, a low-cost cell phone, and health benefits, education, employment and other services. The outreach taught program staff that each housing site would need a dedicated staff person to oversee one-on-one assistance, build trust with residents, respond to customer service requests, and collect high-quality user survey data. Residents and housing site hosts have been involved as volunteer drivers and as project representatives to develop outreach strategies,[109] select vehicle sites, help raise awareness and recruit community membership. All of these equity strategies represent sophisticated and impactful approaches that should be replicated across programs.

b. Additional Best Practices

i. Successful Partnerships

This program has wide support and buy-in across sectors due to the variety of partners involved, including housing organizations, utilities, the City of Sacramento, Zipcar and CARB staff. This diverse team has brought a wealth of time, resources and capacity to the program. For example, the housing sites provide staff time to sign up and troubleshoot with residents, Zipcar maintains the vehicle fleet and handles vehicle reservations, the utility provides discounted rates for electric vehicle charging, and the Sacramento Air District funded the $100 per month mobility voucher for residents who do not drive. To ensure program success, it was critical to have a multi-team approach with a variety of skill sets such as equity expertise, communications, outreach, project management, economic analysis and other relevant areas. Additionally, having the city and regional support allowed this project to be integrated with other complementary investments in underserved communities, such as mobility hubs. Having shared goals and complementary roles around advancing transportation equity, clean vehicle adoption and vehicle miles traveled reduction proved crucial to success.

3. Equity in the Outcomes

As of June 30, 2020 there were 565 members, representing an average participation rate of 38% among the sites. The vast majority of members are people of color or immigrants. There is a wealth of outreach and education information available through the housing sites and on an easy-to-navigate website.[110]

a. Establishes Paths Toward Wealth Building

Each housing site has one or two volunteer drivers who are compensated $8-9 an hour and relay critical real-time feedback on user's experiences to the administrators. This model increases the mobility of people who do not drive, provides a path toward wealth building for the volunteer drivers, and creates a community-based feedback loop. The transportation subsidy as an alternative to a carsharing membership and the use of volunteer drivers represent good examples of equitable outcomes stemming from administrators adapting the program's mission beyond the original intent in order to better serve all residents.

> "Do the upfront work of first understanding the community before jumping in with a fix."[111]
>
> – California Air Resources Board

b. Additional Lessons Learned

i. Financial Sustainability

Helped by state grant funds to get off the ground, Our Community CarShare has now shown itself to be a successful free carsharing model for residents. However, the next challenge is to develop a financial sustainability model that places equity at its core when grant funding eventually ends. To deliver long-term successful outcomes will require exploring, additional options such as, 1) residents paying user fees, 2) expanding the service to the public to subsidize fares for low-income residents, 3) a partnership with a ride-hailing company, or 4) a combination of the above. **This effort to become financially self-sustaining will need to maintain the values of the existing program, including affordability for low-income residents**. However, equity programs should not have to be required to be completely self sustaining. Programs that prove themselves to deliver intentional benefits should be continually subsidized to ensure accessibility to low-income and disadvantaged communities.

4. Equity in the Measurement and Analysis

In addition to trip data, this project's voluntary user surveys have consistently shown positive feedback—49% of users did not have access to vehicles prior to this service, a clear indication that it is filling a critical transportation gap. Surveys have had relatively low response rates, a challenge that could be helped by incentivizing survey responses with gift cards. Volunteer drivers have also shown to be a consistent source of useful feedback. Measuring the equity benefits of this program is key for long-term success, particularly to justify future funding.

Recommendations for the Program Administrator

1. Allow more volunteer drivers and increase their compensation to minimum wage.
2. Collect more user survey data to improve program administration and provide incentives like gift cards.
3. Consider adding more vehicles at larger sites for greater member access.
4. Consider extending the reservation time period beyond three hours to accommodate for longer trips such as medical appointments.

Agricultural Worker Vanpool Pilot Project

I. Description

CalVans[112] is the only recognized agricultural worker transportation program in the nation and the only public transit agency in the United States that is certified by the U.S. Department of Labor to provide transportation under the H-2A guest worker program. Around 70% of the project fleet is deployed in California's San Joaquin Valley, with the rest in the Coachella Valley, Salinas Valley, Santa Maria and the South Coast—all of which suffer from unhealthy air quality. The program has been transporting agricultural workers to and from their work sites and evolving their community relationships since 2001, and therefore simply needed funding to reduce the emissions of an existing service. With a $4.7 million grant and a 25% match from Calvans, the Agricultural Worker Vanpools Pilot Project[113] launched in the spring of 2019 with deployment of 154 General Motors 15-passenger vans that were retrofitted with hybrid technology.

Unfortunately, due to current technological limitations, for now CARB will hold off on providing additional expansion funding to purchase more clean vehicles. The program itself is a success, but the clean mobility technology it needs has run into barriers, described below. However, once the hybrid or zero-emission technology has evolved to match the needs, these successful outcomes justify a continuation of resourcing of this pilot.

Program Type:
Clean Mobility Equity Pilot

Mobility Uses:
Purchasing and retrofitting new vans with hybrid technology.

Equity Evaluation:
Minimum equity approaches show up in mission and process of this project.

Location:
San Joaquin Valley, Coachella Valley, Salinas Valley, Santa Maria, and South Coast regions

Funding Agency:
California Air Resources Board

Program Funding:
$4.7 million CARB grant and a $1.5 million match from CalVans

Administrative Team:
CalVans

Years of Operation:
2019-present

II. Equity Evaluation

1. Equity in the Mission

a. Prioritize Multi-Sector Approaches

This project has multi-sector goals: to reduce harmful tailpipe emissions by 25%, to reduce the number of single-occupancy vehicles on the road, and to connect workers to jobs. This represents a comprehensive equity approach that also provides additional co-benefits such as safer, more reliable ways for workers to get to their job sites.

b. Emphasize Anti-Racist Solutions and Deliver Intentional Benefits

While not explicitly anti-racist due to state restrictions, this program does intentionally benefit agricultural workers in disadvantaged and low-income communities who are primarily Latino. Targeting this pilot specifically to agricultural workers ensures that benefits are directed to the highest priority populations in a way that meets their needs.

2. Equity in the Process

a. Be Community-Driven at Every Stage and Emphasize Anti-Racist Solutions

CalVans built its outreach approach from the ground up by hiring fluent Spanish speakers from the community – which also establishes paths toward wealth building for these workers and builds community capacity in a way that is race-conscious. Community outreach strategies include events conducted in Spanish, local radio broadcasts, and digital media advertisements. CalVans connects its outreach with existing community events such as health fairs, brings in other community organizations and services, and offers food, giveaways and entertainment for children. Importantly, the program holds events on Sundays when the farmworkers have the day off. The way that this project targets benefits to the Latino community with culturally competent outreach and engagement takes an strong anti-racist approach.

A best practice is allowing the volunteer drivers—who are farmworkers themselves—to park the vans at their homes. This approach has been shown to create a sense of ownership, pride and community recognition, and promotes familiarization with clean transportation technology. Drivers were initially uneasy about using the new hybrid vehicle technology, but became comfortable and enjoyed it once they were trained.

b. Additional Lessons Learned

i. Understand the Limitations of the Technology

This project was challenged by limitations of the hybrid technology that was not ready and able to meet the demands of this service. Transporting farm workers requires off-road use, which takes a toll on the vehicles—and over the course of the pilot it became clear that the hybrid retrofitted vans had performance issues under these conditions. This showed the importance of having upfront, clear

communication with the manufacturers and dealerships about the specific uses of the vehicles and understanding the potential performance limitations of the technology to meet the demand. While these vans can be used on paved roads, this pilot will have to wait for expansion funding until a zero emission alternative can handle the off-road conditions.

c. Additional Challenges

i. Funding

Although CalVans is a public transit agency, it is technically designated as a Joint Powers Authority, meaning that it is only eligible to receive grants and isn't eligible for federal or state transit funding, complicating the search for expansion funding.

3. Equity in the Outcomes

With CARB funds, CalVans purchased and converted 154 gas vans to hybrid power, which now comprise 24% of CalVan's agricultural worker vanpool fleet. From its launch in July 2019 until September 2020, CalVans has provided over 600,000 passenger trips, served 15,000 agricultural workers, and logged close to 20 million passenger miles traveled.

a. Additional Lessons Learned

i. Financial Sustainability

The existing CalVans business model was already financially self-sustaining and does not require additional operational funding from CARB, who simply provided funding for the vans. Eighty-nine percent of the agricultural employers pay 100% of all of the vanpool costs because this service reliably gets their employers to the work sites. The balance of the remaining 11% is shared between the farm owners and the farm workers who pay $2-3 a day to help cover CalVans' cost of maintenance and insurance. The drivers being volunteer farm workers also helps to keep operational costs low. The high demand for this service as demonstrated by the long waiting list of agricultural employers—a funding analysis showed that 600-900 additional vans would be needed to meet the need—indicates great success. As a result, CalVans has expressed a continuing desire to help replicate this program elsewhere and to help others to do so.

> "This service fulfils a need for users. People believe in the program because they know it's here to help them."[114]
>
> – Georgina Cardenas, CalVans

4. **Equity in the Measurement and Analysis**

   Rider surveys, participant feedback and other qualitative information is invaluable, and has served as a crucial way to measure rider satisfaction and improve the service. Example survey questions included "Where do you want to get picked up? What do you dislike about this service? How did you get around before this service?" This type of information is critical, and program administrators should create options to supplement reports or hard data with qualitative data conversations and user surveys. It's critical to move away from solely focusing on limiting, quantitative measures of success such as ridership and pollution reduction that fail to capture the full picture. **The measures of success do not always have to be "expanding the program" and "technological breakthroughs." On those measures alone it can easily be inferred that a project failed even though community members love it and want it expanded, which is why qualitative measures of success like "building community trust" and "trying bold, innovative concepts" should be upheld as just as important to the success of a pilot project**. Designating innovative mobility services as "pilot projects" allows room for flexibility, adaptive management, trial and error and testing new ideas. Based on evaluation, projects and programs need to adapt based on what works and doesn't work in real time, and not just continue business as usual.

Recommendations for the Program Administrator

1. Connect CalVans with others trying to replicate similar programs around California and the country.

2. During off times when the vans are not in use to transport workers, expand the ability of volunteer drivers and/or other riders to use the vans for recreation, grocery shopping or other purposes that can fulfill their other mobility needs.

Recommendations for the California Legislature

1. To encourage the expansion of vanpool programs like CalVans, allow state and federal transit funds to be available for vanpool services, not just transit agencies.

Ecosystem of Shared Mobility in the San Joaquin Valley Project

I. Description

The Ecosystem of Shared Mobility[115] consists of three shared mobility services in rural communities in California's San Joaquin Valley: Electric vehicle carsharing, known as Míocar, located in affordable housing complexes in eight rural communities in Tulare and Kern counties; a volunteer ridesharing service, known as VOGO, which supplements existing transit service in transport-disadvantaged rural areas in San Joaquin and Stanislaus counties; and the Mobility-as-a-Service (MaaS) platform that allows planning and/or payment for fixed and demand-responsive transit service, including VOGO, in San Joaquin and Stanislaus counties. This service is known as Vamos, and is accessed through the Vamos Mobility app. The project partners include various stakeholders, including regional transportation planning agencies, community-based organizations, shared mobility providers, transit agencies and universities. CARB contributed $2.2 million and $1.5 million was matched from San Joaquin Valley Partners, for a project total of $3.8 million.

Program Type:
Clean Mobility Equity Pilot

Mobility Uses:
Electric vehicle carsharing, volunteer ridesharing service, and a Mobility-as-a-Service (Maas) platform.

Equity Evaluation:
Throughout its mission, process, and outcomes, this project embeds equity approaches that lean towards a tranformative approaches.

Location:
Rural regions in the San Joaquin and Stanislaus counties

Funding Agency:
California Air Resources Board

Program Funding:
CARB contributed $2.2 million, $1.5 million was matched from San Joaquin Valley Partners, for a project total of $3.8 million

Administrative Team:
San Joaquin Council of Governments, Stanislaus Council of Governments, Mobility Development, UC Davis, Kern Council of Governments, MOVE, SigalaINC, CalVans, Fresno State University, San Joaquin Valley Air Pollution Control District, Self-Help Enterprises, and the Tulare County Association of Governments

Years of Operation:
2018-2021

II. Equity Evaluation

1. Equity in the Mission

a. Prioritize Multi-Sector Approaches

The Ecosystem project is a collaboration between various government, academic and nonprofit groups with the goals of reducing emissions, decreasing barriers to mobility access, and lowering transportation costs for disadvantaged populations in the rural San Joaquin Valley. This project takes a particularly strong multi-sector approach through its partnerships with affordable housing complexes, community-based organizations and UC Davis,[116] whose researchers will be studying and evaluating the overall benefits. This wide variety of partners brings a range of skill sets and takes on a number of roles to help make this project a success, including outreach, engagement, familiarity with community needs, research, technical expertise and more.

b. Emphasize Anti-Racist Solutions and Deliver Intentional Benefits

While the project cannot explicitly center race-conscious language in the stated goals due to state restrictions, its design aligns with an anti-racist approach because 100% of the project's benefits are targeted to over 25 census tracts located in rural, disadvantaged communities across the San Joaquin Valley, which are primarily communities of color. Compared to other programs this is a relatively standard equity approach, yet nevertheless it provides a solid foundation.

2. Equity in the Process

a. Be Community-Driven at Every Stage

Stakeholders were critical to identifying the disadvantaged communities in need of transportation assistance and in selecting promising pilot options that were used to develop the application for CARB funding. UC Davis researchers, in partnership with the Valley Metropolitan Planning Organizations, worked with local stakeholders to conduct outreach and data collection, compare shared mobility service concepts, and develop community partners for implementation.

The Ecosystem pilots included community-based organizations as key implementation partners. MOVE Stanislaus, which operates volunteer and travel training programs to meet the access needs of differently abled people in their community, is the nonprofit community partner for the VOGO and Vamos programs. MOVE conducts ongoing community outreach to recruit volunteers and clients and to engage in "train the trainer" activities (e.g. training transit, healthcare, affordable housing, and group home staff to help clients meet their travel needs). This model is helping to build the capacity of the community across sectors.

Self-Help Enterprises is the key community-based organization for Míocar, organizing and leading outreach for the pilot, including focus groups and active community advisory boards in Tulare and Kern Counties. Self-Help is the largest affordable housing developer in the San Joaquin Valley, with a large community development department. Both pilots ramped up relatively quickly, including the installation of charging infrastructure. **Project partners believe that the community-driven nature of the projects led to community acceptance, which was vital to both pilots' relatively quick ramp-up and overcoming the challenges posed by COVID-19**.

b. Additional Challenges

The reimbursement contract for the grant posed significant cash flow problems that required significant effort and resources on the part of project partners to resolve. The state's inability to provide advance payment for all entities involved in the grant other than the leads has proved to be an equity issue. Often the most under-resourced community partners do not have the cash on hand they would need to begin implementation and then wait to be reimbursed. However, project partners believe that CARB is trying to address reimbursement contract challenges for equity projects in future grant programs.

3. Equity in the Outcomes

a. Establish Paths Toward Wealth Building and Be Community-Driven

Míocar offers services at eight affordable housing sites in six rural communities, with a total of 27 electric vehicles and 17 chargers in Tulare and Kern counties. Implementation and continued operation of the pilot encountered two major barriers. First, the project faced significant challenges attracting a commercial carsharing vendor willing to provide service in the disadvantaged rural market and share data for evaluation. As a result, a new local nonprofit called San Joaquin Valley Community Shared Mobility, Inc., was created to run the carsharing service, with the goal of keeping pricing low and to keep the door open for future public grants to expand the service. The bylaws of the nonprofit that runs the carsharing service specify that the majority of the board members must be users of the service, in addition to local nonprofits and other vested stakeholders. **The bylaws, the board members and the ultimate governance structure will be built out later in 2021. This community-ownership model delivers direct benefits and helps to build and keep wealth, capacity and assets within the local community—rather than funneling that wealth to an outside mobility company**. This is one of the most advanced equity approaches to building and sustaining community wealth, and is a practice that should be upheld throughout other programs.

b. Deliver Intentional Benefits

VOGO offers free rides to residents in rural disadvantaged areas when transit is not an option in San Joaquin and Stanislaus counties. In March of 2020, there were eight trained volunteers who provide rides with their own vehicles and are reimbursed at per mile IRS reimbursement rate (56 cents per mile in 2021). As the volume of rides grew—at its peak 120 individual VOGO trips in February 2020—so did the number of passengers who shared the rides. Due to COVID-19, now only one passenger per car is allowed. More equity outcomes will become clear as the projects continue to be implemented.

4. **Equity in the Measurement and Analysis**

Researchers at the University of California Davis are not only managing the overall project, but are also leading the evaluation of the pilots to ensure that it serves as a model across the state. The preliminary evaluation of Míocar suggests that most user households include four or more people with an income less than $50,000 annually. Nearly half of the users do not have a personal vehicle available to their household, and the median vehicle age of members is 10 years. Based on survey results, users indicated that 59% of trips taken with Míocar would not have been possible in the absence of the service, and the majority of users indicate that the availability of Míocar will allow them to make more trips than they could otherwise. An early evaluation of VOGO indicates that most members live alone and have very low incomes (less than $10,000 per year.) They often lack access to cars and find transit and ride-hailing fares to be too expensive. Clients use VOGO largely to travel for medical and shift work purposes and less frequently for grocery and social trip purposes. Over a third of VOGO clients would not have been able to make their trip without the VOGO service.

Recommendations for the Program Administrator

1. CARB should provide incentives to initiate and sustain partnerships that bring together community-based organizations, academics, local and regional government agencies, especially in rural communities with limited resources.

2. Share best practices for developing a community-ownership mobility model and for setting up a separate nonprofit to run the projects.

3. Find ways to compensate residents/advisory board members for participating in the evaluation while building their capacity, such as in the survey design, data collection, and review. This critical collaboration with the university may also serve as a workforce and skills development opportunity for residents. See this example[117] from TransForm and find more resources in the Making Racial Equity Real in Research[118] report.

Community-Owned Mobility Programs

Community-owned mobility programs may be defined and implemented in a variety of ways. **However for the purposes of this section we generally define community-owned mobility programs as programs 1) that have been collectively co-created, developed and deployed by residents of a community and 2) where assets are owned and controlled by a local community-based organization.** The primary purpose of community-ownership models is to promote social, economic, and environmental benefits to the community—rather than on churning a profit. This model can help retain wealth, capacity and assets within the community.

Community-owned models have often been developed out of necessity because of the difficulty of attracting private mobility companies to low-income areas that may be unfairly deemed "unprofitable" and therefore not worthy of investment. Community-owned models can come along with private investment, yet may require guidelines and incentives to ensure that the community still controls the mobility program.

Community-ownership models certainly represent a higher standard of equity and community building. **Yet to help financially sustain them, community-ownership models will likely require the support and resources from government agencies, particularly in the early stages to get off the ground**. Unfortunately, due to a lack of tools, expertise and experience, government agencies generally have an aversion to funding these innovative models—which often run counter to how the government traditionally conducts grants and funding processes. This can also lead to government administrators' fears around delivering grants to under-resourced communities and organizations.

While other programs and pilots included in this evaluation represent community-owned and operated models, Green Raiteros is categorized into its own section because it is unique in that it did not formally receive a state grant until this year, and had to jumpstart its program without the full support of the government. Only until recently has the state of California become more open to funding these types of community-ownership models, yet there is still a long way to go.

Green Raiteros

I. Description

Green Raiteros[119] operates as an electric ridesharing program—or an "indigenous Uber"[120] as the Mayor calls it. Now formally established as a volunteer transportation organization,[121] volunteer drivers use the program's electric vehicles or their own vehicles to drive fellow residents to access medical appointments or other services in exchange for a small fee. This program serves predominantly low-income Latino residents, many of whom are farmworkers in this rural region that suffers from some of the unhealthiest air quality in the country and high transportation costs.

The LEAP institute administered the program, and other stakeholders involved in the planning process include EVgo, the Fresno County Rural Transit Authority and the Shared-Use Mobility Center. Greenlining helped the nonprofit The LEAP Institute to apply for funds through a legal settlement. The subsequent $519,000 they won helped to establish the program, an office, a garage for maintenance, an operations office and an additional award from a private foundation purchased two vehicles. In 2020, through CARB's Clean Mobility Options pilot, LEAP was awarded a $150,000 planning grant and is waiting to hear if they will also receive $1 million in implementation funds. This represents the first time that Green Raiteros has been awarded state funds.

Program Type:
Community-Owned Mobility Program

Mobility Uses:
Electric ridesharing

Equity Evaluation:
Throughout its mission, process, and outcomes, this program adheres to primary tranformative equity approaches.

Location:
Huron, California

Funding Agency:
Only recently, the California Air Resources Board

Program Funding:
$519,000 from a legal settlement, and $150,000 from CARB's Clean Mobility Options pilot

Administrative Team:
The LEAP Institute, EVgo, the Fresno County Rural Transit Authority, and the Shared-Use Mobility Center

Years of Operation:
2018-present

II. Equity Evaluation

1. Equity in the Mission

a. Emphasize Anti-Racist Solutions

The primary users of this service are Latino and the program was created to provide a culturally relevant service including working with all bilingual drivers. **This is a strong equity approach because the program ensures the delivery of intentional benefits to the residents of Huron by upholding existing cultural norms**.

b. Prioritize Multi-Sector Approaches

Founder of Valley LEAP and Mayor of Huron, Rey León, describes the goals of the program as simultaneously solving five problems: 1) environmental justice, 2) economic justice, 3) climate justice, 4) health justice, and 5) transportation justice. Including a series of broad, holistic goals that acknowledges the wide array of community priorities represents a good equity approach.

2. Equity in the Process

a. Be Community-Driven at Every Stage

Green Raiteros represents a truly community-driven program because its concept was born from an existing informal raiteros system long before the formal program was established, where residents with cars volunteer to transport their neighbors in exchange for gas money or a small compensation. This type of informal ridesharing system is prevalent within Latino communities. In order to create more dependability and efficiency, LEAP and community stakeholders decided to formalize it into a more sustainable system. The program has a board of directors and LEAP staff members are responsible for managing the program's formal dispatch center and general operations to help connect riders with drivers in advance. Many drivers are older, retired people who are eager to contribute to their community by offering rides and helping out their neighbors. This equity approach is significant because it recognizes and uplifts existing community practices which helps to better meet people's needs.

b. Establish Paths toward Wealth Building and Deliver Intentional Benefits.

Green Raiteros establishes community wealth-building in a few ways, 1) deploying community-owned electric vehicles and infrastructure, 2) hiring a program manager, and 3) by allowing volunteer drivers to utilize the dispatch system while still using their own vehicles and collecting a small fee for their service. College students who are home in between school have used this as a way to make some pocket money, which again establishes paths toward wealth-building and is a form of youth capacity building. **This represents a strong, intentional approach to building and keeping benefits and wealth inside of the Huron community, rather than hiring people or corporations from outside the local community who do not represent high need populations or have barriers to employment**.

"We have to train and hire the right people to make green mechanics out of brown folks"[122]

– Rey León, Mayor of Huron

3. Equity in the Outcomes

a. Deliver Intentional Benefits

Green Raiteros now owns two electric vehicles and 10 charging stations. This program also inspired the installation of 12 more charging stations at apartment complexes in Huron. LEAP staff hope that the installation of these public charging stations around the town will increase their residents' accessibility and interests in electric vehicles, as well as alleviate range anxiety. This program also serves as an educational tool about the benefits of electric vehicles and has led a few volunteer drivers to apply to financial incentive programs to purchase clean vehicles of their own.

As of summer 2019,[123] the program has 11 volunteer drivers and a list of over 100 clients. Before COVID-19, the program was providing around 25-30 trips per month,[124] and in some cases has had to decline ride requests because of a lack of vehicle or driver availability. Unfortunately, with the advent of a pandemic, Green Raiteros has had to take a pause due to public health concerns. However, once it is safe, the program intends to continue expanding the number of electric vehicles and recruit more drivers—which will naturally require additional capacity and resources.

b. Additional Challenges

i. Funding and Financial Sustainability

This program has faced a number of challenges to balance financial sustainability with the desire to expand operations at an affordable price for riders. LEAP previously applied unsuccessfully for several state of California grants due a lack of capacity and technical assistance. This lack of resources was a huge barrier to submitting a competitive proposal, particularly for a new type of mobility service.

As the program has expanded, to help reimburse the cost of rides LEAP has been currently seeking two approvals: one as a non-emergency medical transportation provider and a second approval from Fresno County's taxi scrip program to serve high-need residents. Becoming a non-emergency medical transportation provider[125] would allow Green Raiteros to transport patients to medical appointments with the cost covered by Medicare and Medicaid. The Fresno County taxi scrip[126] program provides a 75% subsidy for taxi services for people over 70. Unfortunately Green Raiteros was denied by the taxi scrip program, because volunteer transportation organizations are not recognized as legitimate service providers in California. Meanwhile, the County has contracted with transportation network companies like Lyft and Uber to transport seniors through the taxi scrip program. California's unwillingness to recognize volunteer transportation organizations like Green Raiteros has been a barrier from even competing with corporate versions of a very similar model. This barrier to being classified as a "legitimate" service has prevented Green Raiteros from developing a financial sustainability model.

4. **Equity in the Measurement and Analysis**

This program is tracking quantitative data on ridership and trip purposes, which generally are for medical procedures and check-ups that they may not have obtained without access to this program. LEAP's recent surveys and needs assessment of the region will continue to inform and improve the program. However, some of the most interesting findings were not driven by hard data or surveys. In our interviews with LEAP staff, they shared that before Green Raiteros, riders who used intermediary companies to get to medical appointments regularly experienced miscommunications and pick up delays, often as a result of language barriers. Green Raiteros' bilingual service has solved the timeliness issue, and more importantly, drivers and riders both report immediately building relationships with one another.

Recommendations for the Program Administrator

1. LEAP should establish an active community engagement council to support the continued improvement of Green Raiteros.

2. To further measure and advance equity outcomes, develop ways to measure residents' interest, understanding and access to electric vehicles as a result of this program.

Recommendations for the California Legislature

1. Establish legislation to recognize and expand volunteer transportation organizations in California so that they can contract directly with the government. Currently only companies like Uber, Lyft and taxis are recognized.

California Energy Commission

The California Energy Commission's Clean Transportation Program[127] provides up to $100 million dollars each year to foster innovation and speed up the development and deployment of clean transportation and fuel technologies. The goal of the program is to help reach California's climate, zero-emission vehicle and air quality goals while promoting long-term economic development. These funds are collected from vehicle and vessel registration, smog abatement fees and vehicle identification plates. The Clean Transportation Program funds a wide range of projects, including electric vehicles and charging infrastructure, hydrogen fuel cell technology, medium and heavy duty vehicles, natural gas, biofuels and workforce development. Despite these many project areas, our team chose to narrow our equity evaluation to the CEC's School Bus Replacement Program given the program's potential and thoughtful equity design.

School Bus Replacement Program

I. Description

The California Energy Commission School Bus Replacement Program[128] assists schools throughout low-income and disadvantaged communities in California in transitioning from old, polluting diesel school buses to zero or low emission vehicles. The program provides vehicle replacements, but also fueling infrastructure and workforce development and training.

There are currently six full time CEC staff employees responsible for providing capacity building and technical assistance for under-resourced school districts to help them maneuver the electric vehicle adoption process. Additionally, a streamlined application process has been instrumental in assisting over-burdened school districts. However, more education is required than what CEC staff currently has the capacity to do. In the future if more zero emission buses are to be deployed there are still many school districts that do not have existing partnerships with CEC and therefore may have negative perceptions or misinformation about electric vehicles.

The School Bus Replacement Program will not be considered for additional funding in the near term due to an emphasis on COVID-19 economic and recovery priorities and job creation. However funding plans for the program will be assessed in the future.

Program Type:
Transitioning to zero and low emission school buses.

Mobility Uses:
Battery electric school buses, charging infrastructure, and workforce development.

Equity Evaluation:
This program adheres to minimum equity approaches in its mission and process.

Location:
Statewide

Funding Agency:
California Energy Commision

Program Funding:
$94 million

Administrative Team:
California Energy Commision

Awards:
235 zero emission buses and related charging infrastructure

Years of Operation:
2018-2022

II. Equity Evaluation

1. Equity in the Mission

a. Emphasize Anti-Racist Solutions

The School Bus Replacement Program aims at reducing child exposure to diesel exhaust by replacing old polluting school buses with zero or low emission vehicles. As with other state programs, explicit anti-racist goals are prohibited. While there is not an explicit funding set aside to low-income and disadvantaged communities, funding allocations do give priority to schools in those communities, which generally are communities of color. This priority to school buses operating in low-income and disadvantaged communities does represent a more explicit equity approach, yet this could be further strengthened by devoting 100% of its funds to these priority communities.

b. Prioritize Multi-Sector Approaches

The School Bus Replacement Program establishes a multi-sector approach because it aims to not only replace polluting vehicles to reduce toxic exposure to schools, but also to provide economic opportunity co-benefits by funding and establishing a workforce development and training pathway through the community college system.

2. Equity in the Process

a. Deliver Intentional Benefits

To ensure that resources would be awarded to districts most in need of assistance, the CEC crafted its scoring guidelines so that districts serving disadvantaged and low socioeconomic communities were more likely to score highly during the application process. Seventy percent of the score was based on the age of the bus needing to be replaced and the remaining 30% available was divided among districts' eligibility for the Free and Reduced Price Meal Program and the highest CalEnviroScreen disadvantaged community score in the local education agency's territory. Schools in disadvantaged and low income communities tend to have older more polluting buses and this direct investment is able to accrue immediate environmental and economic benefits by replacing the "dirtiest" buses. The selection process also includes an "opt-in" workforce development and training partnership proposition with local community colleges, in which nearly all schools chose to participate. This type of scoring process that integrates clear criteria and prioritizes the highest need communities represents a good equity approach.

b. Establish Paths Toward Wealth Building

This program explicitly focuses on workforce development and is innovating on the model by using an online pilot training model through community colleges located near school bus deployment locations. The workforce development program is offered in partnership with school bus and charging infrastructure manufacturers.

School bus maintenance and service technicians are trained either in person, online or both to sector and industry operations and maintenance standards as well as for zero emission vehicle technologies. This emphasis on workforce development and the cross-sector partnership with community colleges is a strong equity approach that should be replicated across other programs.

c. Additional Lessons Learned

i. Outreach and Engagement

The School Bus Replacement Program has been able to successfully engage with communities months in advance of the solicitations. Prior to releasing the School Bus Solicitation, CEC staff conducted several public workshops to collect community input. Staff held three scoping workshops in Los Angeles, Fresno and Sacramento to make it easier for local education agencies to attend in person and provide input. These workshops helped to guide the CEC in its decision to distribute the $75 million evenly to four different regions in the state: North, Central, South and Los Angeles. Staff also held pre-solicitation and pre-application workshops for both school district and bus manufacturer solicitations with the purpose of soliciting input on program design, school bus specifications, and eligibility.

ii. Alternative Uses of Buses

One innovation related to the pandemic and distance learning, was that some school districts are using the buses for food and laptop distribution to their students rather than having residents pick up supplies and risk contagion. Another innovative approach included having a utility cover the cost of WiFi using the bus as an internet hotspot for students. These two innovations represent important equity approaches because of the disproportionate lack of internet access and COVID-19 impacts in low-income and communities of color.

Vehicle to Grid Integration[129] is an innovation that could help access the full potential of zero emission battery electric school buses—yet it remains untapped due to the lack of VGI awareness and acceptance. VGI is bi-directional sharing of electricity between an EV and electric power grid, converting each vehicle into a power storage system. This maximizes the potential of electric buses because VGI can reduce operational costs, which is particularly important for establishing electric bus programs in low-income communities. VGI technology holds considerable barriers due to a lack of information and buy-in from less informed populations, and in this case school districts, many of whom could benefit from this form of technology rather than letting the buses lay dormant. In addition, not all utilities have the electrical infrastructure ready for buses to be integrated with the grid in order for this benefit to be captured. Given worsening climate conditions, VGI applications could be helpful with electricity needs to power buildings and other equipment especially during a power shut during natural disasters.

3. Equity in the Outcomes

The program was able to fund 235 zero emission buses and associated charging infrastructure with the available $75 million. Ninety percent of the school districts awarded are located in low-income and disadvantaged communities—which certainly represents a success, yet a stronger equity approach would be distributing 100% of the awards to those priority communities.

The number of applications received would have replaced 1,600 diesel school buses and would have required $422 million plus an additional $79 million for charging infrastructure. This shows a clear demand for this program. Unfortunately, COVID-19 paused this program's in person workforce development efforts. However, online training has had incredible success to date and may complement continuous zero emission bus training.

4. **Equity in the Measurement and Analysis**

The CEC is requiring 12 months of data collection from its awardees, which includes mileage and energy usage before and after the new bus delivery. One of the requirements is that all new school bus projects must be cost effective, meaning that the total benefits must outweigh the project's costs over time. Example benefits include fuel savings, maintenance savings, emissions reductions, health benefits and economic benefits. The CEC published a report[130] in 2018 detailing the assumed cost effectiveness of the program and the data collected from the recipients will be used to verify those assumptions. While this approach intends to measure outcomes, it is not designed to capture and measure equity-specific outcomes. Aside from cost effectiveness, we suggest developing clear equity and community engagement definitions, targets, parameters and measures of success to intentionally track for equity benefits. Examples of this include the number of jobs created, amount of GHG reduction, cost savings and wealth generation for school districts, number of people educated on clean energy technology, etc.

Recommendations for the Program Administrator

1. To dispel school districts' negative perceptions about EVs, share testimonials from participating districts to educate about the benefits of EVs.
2. There should be a lot of upfront coordination before launching with state utilities to align goals of the program funding, and in their interest in VGI.
3. Devote 100% of the funds to low-income and disadvantaged communities.
4. Develop clear equity and community engagement definitions, targets, parameters and measures of success.
5. Continue to create innovative and multi-faceted solutions such as using the buses to distribute food and laptops to students' homes during the pandemic.

Recommendations for the California Legislature

1. Establish sustainable funding sources for zero emission bus and infrastructure markets and incentives.

California Air Resources Board's Clean Vehicle Incentives

California has been moving the needle toward electric vehicle adoption by investing in a wide variety of clean vehicle incentives programs. Today over 60 electric vehicle and charging companies[131] are headquartered in California including over 20 manufacturers' sites, and 275,600 jobs EV-related are located in the state. Nearly half[132] of all electric vehicles sold in the U.S. are in California.

Yet we continue to see disparities in access to and adoption of electric vehicles. For example, one study found that White consumers accounted for 55% of electric vehicle purchases[133] between 2011-2015, despite only comprising 37% of the population. California's data clearly shows that incentives such as the Clean Vehicle Rebate Program,[134] which lack a strong equity component, disproportionately benefit[135] middle and higher income White people. CVRP has received on average, 50% more funding[136] each year than all of CARB's Low Carbon Transportation equity programs combined, but has only invested about 33%[137] of its overall funding toward applicants in disadvantaged and low-income communities. We did not evaluate CVRP because 1) it is not an equity program, and 2) years of academic research has proven that it continues to fail to benefit low-income people. This evidence has been mounting since 2016[138] and more recently in 2020.[139] Even attempts to address CVRP's equity issues through the Rebate Now[140] pilot have failed to reduce access barriers for low- and moderate-income consumers.

After over 10 years and $1 billion invested, it is time to retire CVRP. This does not mean that we should stop funding incentives for the deployment of electric vehicles, but rather that the focus and funding for CVRP must be redirected toward the people facing the largest barriers to adopting the technology. Because of this, we do not recommend that other states replicate the Clean Vehicle Rebate Program, given its clear equity deficiencies, but instead urge that they prioritize clean vehicle incentive programs that lead with equity and have shown successful equity outcomes.

> "When it comes to equity you can't just cater to the first adopters – you have to start by catering to the hardest to reach populations"[141]
>
> – Rey León, Mayor of Huron

The suite of clean vehicle incentive programs that we chose to evaluate for this report specifically target low-income consumers. Many of these programs are showing promising results by integrating approaches such as financial education and consumer protection measures, which help to reduce barriers to EV adoption for low-income residents. Unfortunately, these programs have only recently started receiving state funding and year after year are oversubscribed due to high demand and limited funds.

Clean Vehicle Assistance Program

I. Description

The Clean Vehicle Assistance Program[142] is an equity-focused California statewide program providing grants and affordable loans to help low-to-middle-income earners purchase clean vehicles at the point of purchase. Grants of $2,500 are offered for conventional hybrid cars and $5,000 for plug-in hybrids and full-battery electric vehicles. The program also offers two different charging grant options to homeowners and renters: A Level 2 charging station installed inside a home by GRID Alternatives, up to $2,000 value, or a $1,000 prepaid charge card valid at a public EVGO charging station and a lower-speed portable charger.

This program is funded by the California Air Resources Board and administered by Beneficial State Foundation, and primarily works in partnership with their preferred lending partner, Beneficial State Bank, to provide a unique loan to CVA Program participants specifically designed to help people with low credit scores and barriers to affordable auto loans. The CVA Program has received over $30 million[143] and has been operating since 2014. The program has helped over 1,200 applicants purchase clean vehicles, electric charging stations, or charge cards. So far, 74%[144] of this funding has gone to applicants who reside in low-income or disadvantaged communities.

Program Type:
Clean Vehicle Incentives

Mobility Uses:
New or used conventional hybrid, plug-in hybrid, full battery electric vehicles, charging station installation, or a prepaid charge card.

Equity Evaluation:
Across its mission, process, and outcomes, this program includes equity approaches generally fall in between minimum and transformative.

Location:
Statewide

Funding Agency:
California Air Resources Board

Program Funding:
$29 million from CARB and $1.4 million in matching funds

Administrative Team:
Beneficial State Foundation

Grants Awarded:
1,200 clean vehicle grants

Years of Operation:
2018-present

II. Equity Evaluation

1. Equity in the Mission

a. Emphasize Anti-Racist Solutions and Deliver Intentional Benefits

The program aims to make clean vehicles accessible and affordable for low- and middle-income earners. Clean vehicle grants are tiered based on income level and vehicle type, providing the highest grants to the lowest income tier.

The program uses an income cap that is influenced by the number of people in a household. The maximum gross annual income[145] for a one-person household is $51,040, and $176,480 for an eight-person household.

This design ensures that the benefits are targeted towards low- and middle-income earners. While California law prevents this program from being explicitly anti-racist by prioritizing people of color, the program's website does state: "as an equity-focused program our priority is to serve communities that are disproportionately impacted by pollution, this often includes low-income communities and communities of color."

2. Equity in the Process

a. Prioritize Multi-Sector Approaches and Establish Paths Toward Wealth Building

This program takes a multi-sector approach: In addition to increasing access to more affordable clean vehicle options, it devotes attention to financial literacy, budgeting and access to low-cost loans. As another form of building and sustaining long-term wealth, the CVA Program intentionally hires staff from communities the program aims to reach. Together, these are good equity strategies that can help low-income families sustain and grow their wealth in the long-term, and should be a central approach in any clean vehicle incentive program.

b. Deliver Intentional Benefits

Best practices of the CVA Program compared to clean vehicle incentive programs like CVRP, include: 1) grants are offered at the point of purchase, not as a rebate, 2) grants can be applied to used vehicles, not just new ones, and 3) affordable financing options cap loans at an 8% interest rate for qualified applicants. The unique structuring of the program is inherently more equitable and lowers the barriers to entry. The CVA Program has extended the time applicants have to shop and purchase a vehicle from 35 days to 125 days, providing applicants more time to redeem their funds once the grant application has been approved. This responsiveness to their applicants' barriers and willingness to adapt and adjust strongly reinforce the program's equity focus.

The option of a prepaid charge card for consumers as an alternative to home charging installation is an important equity component. The CVA Program initially only offered a grant for a home charger, but recognizing that many renters could not make use of this benefit, the program worked with CARB to offer a $1,000 prepaid charge card as an alternative. This important equity approach should be included as an option across all clean vehicle incentive programs to ensure that they do not disproportionately benefit homeowners over renters. Still, charging remains a barrier for people who rent or live in multi-unit dwellings, and more investment is needed to increase their access to reliable charging options.

c. Additional Best Practices

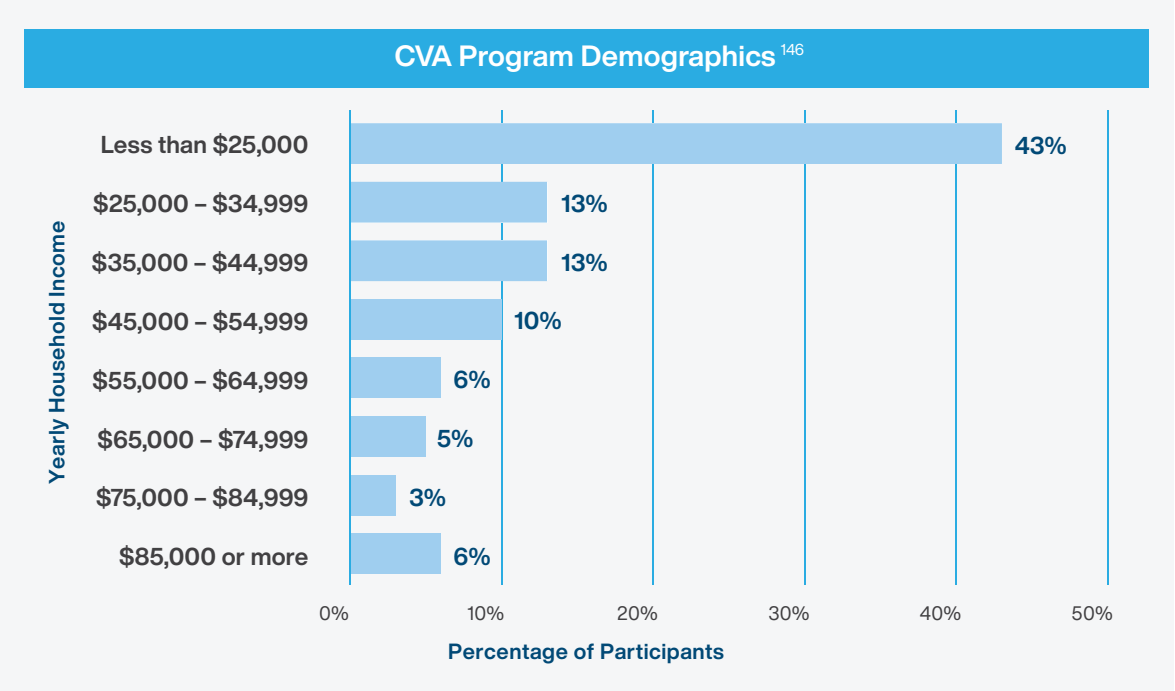
i. Outreach

Clear and consistent messaging on public-facing materials, strategically planning outreach, and the availability of Spanish materials and outreach have all served as best practices, particularly when funding is limited. Another best practice has been coordinating outreach efforts with partner organizations that serve the program's target audiencefor example, putting outreach materials in the Beneficial State Bank branches that specialize in non-predatory auto loans for lower credit borrowers. Additionally, hiring staff from the communities the program intended to reach helps to ensure that outreach strategies reflect the cultural context and needs.

ii. Additional Challenges

The CVA Program is in a relatively early phase and to be successful in the long term, the program needs continued and sustained funding that will grow over time. Yet compared to other clean vehicle incentive programs, this program is severely underfunded, which limits its reach to communities who need it most. The underfunding is particularly harmful because the program's process requires significant resources to build out a case management team in order to effectively connect low-income consumers with the grants. Furthermore, due to state restrictions, Beneficial State Foundation has not been allowed to provide advance pay to the community-based organizations it works with, limiting the foundation's ability to build partnerships with smaller community-based organizations that work closely with the residents they aim to serve.

3. Equity in the Outcomes



As of December 2020, the CVA Program had issued over 1,200 clean vehicle grants totalling over $5.7 million awarded to low-income households. Thirty percent of participants also received either a home charger installation or a prepaid charge card. Eighty-three percent of participants bought used clean vehicles, which reinforces why other clean vehicle incentive programs should also allow for the purchase of used vehicles.

d. Deliver Intentional Benefits and Establish Paths Towards Wealth Building

The CVA Program's data[147] as seen in this graph clearly shows that it primarily benefits very low-income people, compared to CVRP which only has distributed about 33%[148] of its overall funding to applicants in disadvantaged and low-income communities. **This program proves decisively that even very low-income households want to and will take advantage of clean vehicle technology if given the tailored assistance they need**.

Additionally, approximately 85% of the staff hired by BSF demographically represent the communities they work with, enabling better more culturally competent service.

4. **Equity in the Measurement and Analysis**

   BSF has been working to improve its measurement and analysis of the program, with a strong focus on equity. **In addition to just tracking household income data and where participants reside (i.e. disadvantaged community, low-income community), BSF is looking to collect data to better understand why applicants don't complete the process. It is important to not just track successes but also to evaluate who was unable to move forward in order to improve the program and help more people access the grants and fair financing**. This represents a critical equity approach that should be replicated across programs. BSF is also seeking feedback on its website and online application to learn what changes can make it more user-friendly.

Recommendations for the Program Administrator

1. Provide flexibility in administrative fees to be able to grow a team that is able to support and process application demand.
2. Incorporate a vehicle purchase cap price.
3. Keep the program simple and accessible by limiting programmatic changes.
4. Share the lessons learned from data collection around barriers applicants faced to finishing the application process.
5. Prioritize households with the most barriers to participation.
6. Constantly analyze data and make sure that what is being stated about the program is actually occuring.

Recommendations for the California Legislature

1. Conduct a study on vehicle leases to best understand its benefits and challenges and whether they provide a benefit to low-income households.

Clean Cars 4 All

I. Description

The Clean Cars 4 All[149] (program enables low-income Californians to replace older, polluting vehicles with cleaner ones such as a conventional hybrid, plug-in hybrid or battery electric, with a voucher of up to $9,500 and an optional home charger up to $2,000. **The program also includes an alternative mobility option that allows applicants to obtain a $1,700 voucher for an electric bike or a $5,800 voucher for transit, carsharing or other mobility options instead of a vehicle purchase**. Even though the program is no longer a pilot, it still only operates in five air districts: San Joaquin Valley,[150] South Coast,[151] Bay Area,[152] Sacramento[153] and San Diego.[154]

These programs are solely administered by air districts, who subcontract with nonprofit organizations to help implement various aspects of the program, from outreach and education to application processing. Of the $112 million that has been allocated to CC4A overtime, CARB has awarded $41 million[155] to the South Coast Air Quality Management District and $41 million to the San Joaquin Valley Air Pollution Control District. The Bay Area Air Quality Management District has been awarded $14 million, with the air district providing $5 million of its own funds to the program. Sacramento Metro Air Quality Management District has been awarded a total of $9 million and launched the program in August 2020. San Diego Air Pollution Control District will be awarded a total of $5 million and is still developing its program. Given Sacramento's recent launch, this case study will focus primarily on the first three implementing air districts (South Coast, San Joaquin and Bay Area.)

Program Type:
Clean Vehicle Incentives

Eligible Uses:
Plug-in hybrid, battery, or hydrogen fuel cell electric vehicles.

Equity Evaluation:
This program adheres to minimum equity approaches in its mission and outcomes.

Location:
San Joaquin Valley, South Coast, Bay Area, San Diego, and Sacramento

Funding Agency:
California Air Resources Board

Program Funding:
$102 million to Low Carbon Transportation funding and $10 million of Volkswagon funding since Fiscal Year 2014-15

Administrative Team:
The South Coast Air Quality Management District, the San Joaquin Valley Air Pollution Control District, the Bay Area Air Quality Management District, and the Sacramento Metro Air Quality Management District

Grants Awarded:
9000+ clean vehicle grants

Years of Operation:
2015-present

II. Equity Evaluation

1. Equity in the Mission

a. Emphasize Anti-Racist Solutions and Deliver Intentional Benefits

This program seeks to get low- and moderate-income drivers in disadvantaged communities out of old, polluting vehicles and into a zero- or near- zero emission vehicle (conventional hybrid, plug-in hybrid or, battery electric). The program is also open to income qualified drivers who do not live in disadvantaged communities, but with a lower incentive amount. Although the program does not include race-conscious language or a clear anti-racist approach due to state restrictions, – the design of the CC4A program specifically targets low-income households and those that reside in disadvantaged communities, which primarily benefits communities of color. This is a standard equity approach that should be applied across all clean vehicle incentives programs to ensure that they target the highest need populations.

b. Prioritize Multi-Sector Approaches

This program takes a multi-sector approach because it prioritizes education around new clean technology, consumer protections, and alignment with other clean vehicle incentive programs, such as the Clean Vehicle Assistance Program. This means that for the purchase of a new plug-in hybrid or electric vehicle, a low-income person who lives in a disadvantaged community could stack the benefits of CC4A and CVAP for a total of $14,500, plus $2,000 for a home charger installation or a $1,000 prepaid charge card. Similarly, this represents a good equity approach that must be standardized across all clean vehicle incentive programs to ensure that they are meeting multiple needs.

2. Equity in the Process

a. Additional Lessons Learned

i. Outreach

Conducting program outreach and engagement by partnering with groups that already have existing strong connections with communities and expertise with case management has proven to be a best practice that also serves as a form of capacity building for community groups. For example, in the San Joaquin Valley, the San Joaquin Valley Air Pollution Control District partnered with Valley Clean Air Now and built off its existing Tune In Tune-up program, which targets low-income applicants who needed to repair their vehicle to pass a smog test. Their staff, already familiar with doing outreach and education to those most in need, has helped ensure 95% of the project participants are low-income applicants. In the Bay Area, GRID Alternatives was selected by the Bay Area Air District as their outreach partner. GRID had the infrastructure in place to conduct outreach and case management for solar programs for low-income families, and therefore could incorporate CC4A outreach efforts into their existing efforts to reach the target communities. The programs also share information and lessons learned to avoid reinventing the wheel as they try to improve. For example, the Bay Area, Sacramento and San Diego CC4A programs have been in communication with the San Joaquin Valley and South Coast CC4A programs to replicate and adjust components of the program.

ii. Integrating Alternative Mobility Options

The program experienced challenges in incorporating the alternative mobility option as it required coordination with the multiple transit agencies that serviced the air district's territory. This took months of negotiating to help develop this complementary program. This alternative mobility option is also restricted to the individual applicant, so if the applicant has multiple family members, they only receive one card, limiting the benefit of this option.

iii. Cap on Administrative Costs

The program administrative budget has a cap of 15% of the overall budget—which has limited the ability to staff up at the levels needed to provide the needed sufficient case management resources to walk applicants through the process.

3. Equity in the Outcomes

a. Deliver Intentional Benefits

The San Joaquin program, in partnership with ValleyCAN, has completed close to 3,000[156] clean vehicle replacements, with approximately 95% of them going to low-income applicants.

The South Coast program's partnership with multiple nonprofits to provide outreach, education and case management helped issue vouchers for 6,575[157] clean vehicle replacements—with 88% going to low-income applicants.

Since March 2019, Bay Area's program has awarded over 2,000[158] clean vehicle replacements, with 80% going to low-income applicants.

b. Prioritize Multi-Sector Approaches

Low-income residents in the Bay Area have been able to gain access to home solar benefits through offerings by its outreach partner, GRID Alternatives Bay Area. This represents an important multi-sector equity approach that maximizes incentive funding for overlapping programs, and is a best practice that should be replicated across programs.

c. Additional Lessons Learned

i. High Demand, Not Enough Funding

The San Joaquin Valley Air Pollution Control District has experienced challenges due to the lack of funding. Program demand has exceeded available incentive funding, forcing the district to alter or stop outreach efforts because of depleted funding. CARB's funding allocation process also adds to the challenge, as getting money to the air districts is not quick enough to be responsive to demand.

Due in part to its mass media campaign, South Coast AQMD's CC4A program demand consistently surpassed the district's capacity to process applications, and participation was ultimately determined by how quickly the district could process applications. This resulted in funding going quickly and a need to halt the program to process the overwhelming number of applications.

The Bay Area Clean Cars for All program has faced similar financial constraints as demand for funding outstripped supply in mid-2020. Given the impact of CCFA and due to dwindling state budgetary resources, the Air District allocated $10 million in local funding to supplement CCFA in 2020 and 2021. CCFA is still extremely popular and had to initiate a long waiting list in mid-2020 because staff resources were overwhelmed by the influx of interested applicants.

ii. 1099 Tax Form

South Coast AQMD currently provides 1099 tax forms to participating households, a tax document that counts the incentive amount as additional income. CARB does not require Air Districts to provide 1099 tax forms, but has given Air Districts discretion on providing one. Currently, only the South Coast and Bay Area provide a 1099 tax form, but San Diego is currently exploring the possibility of doing so, which would limit participation from households most in need. This creates unintended burdens on low-income applicants and puts them in a difficult situation in which the decision to access an incentive to help address their transportation challenges could jeopardize their eligibility to participate in other needed assistance programs, such as the Supplemental Nutrition Assistance Program.

4. Equity in the Measurement and Analysis

Currently, not all air districts are tracking data beyond the standard reporting requirements outlined by CARB. These standard reporting requirements[159] include participation data, vehicle retirement and replacement, and the location of the disadvantaged or low- to moderate-income communities.

Bay Area CCFA has looked to leverage this data tracking and has developed its program with a full cycle focus on data and metrics. Data is collected at the beginning of an application, during the application and after someone has received their grant. The program collects demographic data such as gender, ethnicity, age and education each time a resident creates an account to begin an application. **Applicants then take a quiz that collects zip code, household size and income to determine eligibility. In the application, the applicant is asked if they own their home, what type of home they live in (apartment, single family, etc.), whether they need a loan, and how they heard about the program. This information can be used to help understand whether a grantee can install a home charger and to understand what outreach and marketing methods work better than others. After an applicant receives their incentive, they are given annual surveys that collect data about their replacement vehicle's usage, charging habits, and other information that helps understand how the incentives are being used. The data collected is analyzed periodically to determine areas for improvement and to help shape changes to policies, program requirements, and outreach.**

To further advance this equity approach, CARB can direct the program and the implementing air districts to at minimum follow the data collection model from Bay Area CCFA. Yet CARB can also direct the air districts to take data tracking a step farther by developing equity metrics that will measure whether the program has achieved equity outcomes and reaching the households most in need.

Recommendations for the Program Administrator

1. All CC4A programs should allow options to replace a car with a voucher for a mobility option such as an e-bike, transit pass, etc.

2. Provide funding to cover the cost of home electrical service panel upgrades.

3. All CC4A programs should coordinate with other vehicle incentive programs, like the CVA and CVRP programs to streamline program requirements and build efficiencies around stacking and income verifications to reduce barriers and confusion.

4. CARB should provide clear direction for the removal of the 1099 tax form.

5. Where applicable, allow for alternative mobility option vouchers to benefit multiple family members.

6. Incorporate equity metrics to determine whether the program advances equity outcomes and reaches households most in need.

Recommendations for the California Legislature

1. Provide reliable and continuous funding for each region.

2. Develop programs for regions that currently don't have a participating air district.

Access Clean California

I. Description

California is implementing a wide variety of incentive programs for electric vehicles, solar and other related programs across the state, administered by several agencies using their own outreach and application processes. The Access Clean California[160] project—formerly known as One-Stop-Shop and now commonly called ACCess—was created in response to the issue that low-income people were expected to learn about each incentive program separately, figure out whether they were eligible for each, and then complete multiple, time-intensive applications across different platforms.

ACCess was developed as a centralized, streamlined website platform for low-income Californians to navigate and access these many complementary incentive programs under one simplified application. It also provided an opportunity to coordinate the outreach and education efforts around these programs by working with trusted voices in priority communities.

CARB provided funding of $5 million to GRID Alternatives to administer this project in collaboration with multiple project partners, including Liberty Hill Foundation, SEIU, Native American Environmental Protection Coalition, Blue Lake Rancheria, Foundation for California Community Colleges and The Greenlining Institute. Greenlining also served as an equity advisor, guiding GRID and its project partners to further equity in the development and implementation of the program.

Program Type:
Clean Vehicle and Energy Incentives Pilot

Uses:
Online web tool to access various clean energy and transportation incentive programs.

Equity Evaluation:
Throughout its mission, process, measurement and analysis, this program embeds equity approaches that fall in between minimum and transformative approaches.

Location:
Statewide

Funding Agency:
California Air Resources Board

Program Funding:
$5 million in Fiscal Year 2017-18

Administrative Team:
Grid Alternatives, Liberty Hill Foundation, SEIU, Native American Environmental Protection Coalition, Blue Lake Rancheria, and Foundation for California Community Colleges.

Years of Operation:
2018-present

II. Equity Evaluation

1. Equity in the Mission

a. Prioritize Multi-Sector Approaches

ACCess aims to increase awareness of and reduce access barriers to a wide variety of overlapping clean transportation and energy programs for low-income people. This represents a solid equity approach because it explicitly works to streamline and improve access for low-income people, while developing a model that can be replicated across incentive programs.

b. Emphasize Anti-Racist Solutions and Deliver Intentional Benefits

While state restrictions prevent explicit race-conscious language from being embedded in this program, ACCess is moving toward an anti-racist approach by intentionally targeting benefits to communities who are typically left out or left behind in climate equity and transportation electrification programs, such as low-income, women of color and tribal communities. ACCess' approach prioritizes these three populations, and programming was intentionally built with the needs of these harder to reach audiences in mind. This is a good equity approach to target the highest need populations and should be replicated across all similar incentive programs.

c. Establish Paths Toward Wealth Building

ACCess intends to establish paths toward wealth building for low-income people of color by breaking down barriers to accessing cost-saving climate equity and transportation electrification programs. **Additionally, ACCess will pilot a workforce development program which will fund community-based organizations to hire staff to increase their capacity to engage in these clean mobility equity efforts. This represents a strong equity approach, going above the bare minimum of just directing funds to support cost savings but also invests funding to create jobs while helping build local capacity**.

2. Equity in the Process

a. Be Community-Driven at Every Stage

Creation of ACCess took a community-driven approach as it was co-developed by diverse community stakeholders and California state agencies as a top recommendation from the Senate Bill 350[161] Low-Income Barriers Studies on clean energy[162] and clean transportation.[163] GRID Alternatives set up a project team that included community groups representing diverse communities of color throughout the state. Involving project partners who work with communities of color from the inception—before any of the implementation strategies were developed—has allowed for their input to guide and shape the development of this program in a way that will address their needs and challenges. This represents an important equity approach, focusing development and implementation on intentionally centering the needs and perspectives of the communities of color being served by these programs.

The development of the technology platform and website has taken a human-centered, universal design approach, prioritizing feedback from community members to make it easy to access and use. This project has doubled down on being community-driven by testing and deploying this technology through a variety of trusted networks of community-based organizations located in frontline communities across California. This community-centered design process is a solid equity approach to reduce access barriers, and should be integrated across similar programs that rely heavily on a website.

b. Build Community Capacity

This project was very intentional in funding and building the capacity of the community group partners. GRID partnered with the following community groups, all representing diverse populations throughout the state: Blue Lake Rancheria (Northern California tribal), Native American Environmental Protection Coalition (Southern California tribal); SEIU International (statewide healthcare and property services workers); Liberty Hill Foundation (representing nine CBOs in the greater Los Angeles region), GRID Alternatives Regional offices (offices throughout the state that serve low-income households) and Foundation of California Community Colleges (statewide with connections to community colleges and smog repair programs). GRID took a holistic approach to fund capacity building, making sure outreach partners were properly funded for their work and knowledge sharing. Funding has allowed outreach partners to expand their teams to build their knowledge and expertise on clean energy and transportation matters and be the trusted voice in their community.

Having outreach partners participate in the development and implementation of the program has empowered them to shape the technology and outreach efforts in a way that would be helpful for their community. GRID wanted to ensure that outreach partners were not just compensated for their time on the project, but that they had a level of decision-making power so that this project reflected their communities.

This represents a very strong equity approach because it resources community groups to conduct outreach and build their expertise and fosters long term trust, while designing programs that are centered around community needs.

"There are risks involved in constantly reinventing the wheel by creating new, separate outreach programs and deployment networks – this creates confusion in the community. Start the streamlining process from the very beginning"[164]

– Terea Macomber, GRID Alternatives

c. Additional Lessons Learned

i. Stakeholder Buy-In

Given the wide variety of stakeholders involved in ACCess, securing buy-in and participation from all parties posed a significant challenge. Many of the clean vehicle incentive programs are administered by local air districts, which do not have expertise in advancing programs through an equity lens. These air districts were not required to participate, and it took significant interpersonal relationship building to convince them to voluntarily participate in this process. These challenges limited the full integration of equity projects into the centralized application process and technology platform, and highlighted the need for stakeholder buy-in early on.

3. Equity in the Outcomes

Given that ACCess is still in its development phase and a full statewide launch of the program is forthcoming, we can only outline anticipated equity outcomes. We expect ACCess to serve as a catalyst to improve participation from hard to reach populations that have not participated in these incentive programs in the past. ACCess will accomplish this through its streamlined application process that will reduce the number of applications one must complete to maximize the various vehicle incentive programs. Additionally, ACCess will pilot an income verification process to help reduce the number of times low-income households have to verify their income.

a. Additional Lessons Learned

i. Building Trust

One key outcome that GRID set out to accomplish throughout this process was developing trust with all the project partners. Even though GRID had worked with most of these partners before, this was the first for many working with each other and for some, the first time engaging in clean transportation programs. GRID conducted listening sessions with all project partners and held monthly meetings and quarterly convenings with all project partners to provide updates and create space to share feedback. Establishing regular communication opportunities and channels creates not onlys trust, but also accountability by having space to talk about issues and concerns that have come up.

4. **Equity in the Measurement and Analysis**

   a. **Be Community-Driven at Every Stage**

   Measurement and analysis play a critical role in helping provide needed information to advance or adjust programs—yet traditional metrics often fail to capture an accurate understanding of equity. **Through a collaborative process, Greenlining worked with GRID and outreach partners to develop equity metrics that will measure how equity is showing up in the program and whether the program needs adjustments. This collaborative process led to the project identifying equity principles that guide its implementation, priority audiences on which to focus efforts and metrics that will identify how equity is implemented**. We looked to develop metrics that created accountability for reaching priority audiences by identifying those priority audiences and ascertaining how many participated and obtained an incentive. We also measured the number of integrated incentive programs that are included in the streamed application process to measure whether the program is effectively reducing the number of applications. Additionally, we developed metrics that looked at how the program was monetarily investing in community groups, and how it shifted decision-making power to them. Metrics also were developed to measure how the investments the program is making lead to co-benefits like job creation and investment in diverse businesses. This represents a strong equity approach that should be followed across programs.

Recommendations for the Program Administrator

1. Expand outreach networks to include new partners who outreach to priority populations.
2. Explore adding additional climate equity programs such as energy efficiency and storage.
3. CARB should require all Clean Vehicle Incentive Program administrators to fully commit and participate in the integration of their programs into the ACCess web tool to streamline the application processes.

Recommendations for the California Legislature

1. Ensure that coordinated outreach and application processes are a formal program requirement for individual climate equity incentive programs going forward, particularly for programs that have clear overlap with existing programs in terms of geography, technology and proposed beneficiaries.

Conclusion

The case studies included within this equity evaluation are innovative, exciting programs and many had never been tried before. As with most pilot projects, things have not always run smoothly—understandably there have been delays, missteps and, most importantly, lessons learned. Yet this experimentation has allowed program administrators, advocates and other stakeholders to continuously evolve our understanding of how to develop and deploy clean mobility programs that truly center equity. While some programs are beginning to turn the tide, many others have severe shortcomings on both equity and long-term sustainability. As part of that evolution, the recommendations within this evaluation and these case studies chart a path toward meeting an even higher standard of equity, which now requires us to re-examine which programs we should prioritize.

After centuries of injustice, society owes it to low-income communities of color to eliminate the programs that are not delivering on equity, improve existing ones, and allocate more funding to the most equitable programs. However it is critical to think in the long term to sustain the most equitable clean mobility programs past the pilot phase. To get there, we will need comprehensive strategies to secure long-term funding mechanisms and to cultivate community capacity — topics that will be explored in a subsequent white paper.

Appendix

Definitions

Cap-and-Trade and the Greenhouse Gas Reduction Fund

The California Global Warming Solutions Act of 2006 requires the California Air Resources Board to regulate the reduction of statewide greenhouse gas emissions. As one strategy to comply with this law, the state launched a cap-and-trade[165] program that makes polluters pay for emitting carbon into our air. Funds received from the cap-and-trade program are deposited into the Greenhouse Gas Reduction Fund and then are appropriated by the Legislature to programs that further reduce emissions, strengthen the economy and improve public health, the environment, and economic opportunities. The majority of the clean mobility programs included in this evaluation are directly funded by GGRF. However, over 20 state agencies and departments participate in the development, selection, and implementation of a wide variety of other programs and projects,[166] including: solar and energy efficiency, urban tree planting, affordable housing, wildfire prevention, climate adaptation and many more. As of 2020, cap-and-trade auctions have raised $12.5 billion and have implemented $5.3 billion in projects.

While cap-and-trade has allowed California to develop such innovative climate investments and programs, it is important to recognize that cap-and-trade is far from a perfect system.[167] The lobbying efforts of oil and gas companies devised gaping loopholes and giveaways that have allowed them to avoid meaningful reductions. In fact, of California's most polluting facilities, many have actually reported increases in local emissions[168] since the onset of this program, especially in communities of color. As a funding source cap-and-trade is also incredibly unstable and susceptible to economic fluctuations. During the 2020 pandemic and economic crisis GGRF revenue plummeted and funding for many of the programs highlighted in this evaluation diminished. There are also serious doubts about the ability of cap-and-trade alone to deliver on its promises—and in fact California is now analyzing[169] the program's ability to meet the state's ambitious climate goals.

CalEnviroScreen 3.0

The CalEnviroScreen (CES 3.0)[170] mapping tool uses 20 environmental and socio-economic factors to determine which communities are most burdened by poverty and pollution. California's 1996 Proposition 209 put a ban on affirmative action and prohibits the state from taking race into account when targeting investments and resources into communities. This bars race from being included as a factor in CES 3.0—despite the fact that race is the single biggest factor in determining who is subjected to disproportionate pollution.[171] While racist government policies have led to disproportionate air pollution in communities of color, Prop. 209 prevents California governments from taking anti-racist actions to undo that legacy. As a result, CES 3.0's 20 environmental and socio-economic factors functions as a proxy for race. However, adopting proxies and workarounds like CalEnviroScreen 3.0 in place of targeting resources based on race and racialized inequities, is not a sufficient racial equity approach because our most polluted regions are communities of color. When targeting investments based on greatest need, other states should not follow the model of using mapping tools that are blind to race. In 2021, a CES 4.0 version will be released to better capture additional factors that impact rural and tribal communities.

Priority Populations: "Disadvantaged Communities" and "Low-Income Communities"

Since the launch of cap-and-trade, Greenlining and our partners have worked to guarantee that the GGRF revenue is prioritized to low-income communities of color.[172] The term "priority populations" refers to "disadvantaged communities" as well as "low-income communities"and "low-income households." In 2012 our coalition worked with California Senator Kevin de León to draft and pass Senate Bill 535 which requires 25% of the GGRF revenue to fund projects that benefit "disadvantaged communities"[173]—which has been defined by the California Environmental Protection Agency as 25% of California census tracts that suffer the most from pollution, poverty, health impairment and other socioeconomic burdens. This 25% of GGRF investment was equal to their share of the population, as 25% of Californians live in a disadvantaged community. Yet over the years it became clear that these benefits needed to be further expanded, to meaningfully address the extreme socioeconomic and environmental disparities in these priority communities. Additionally, there was a need to more fairly distribute GGRF investments to low-income people who live in rural or Tribal regions. Low-income is defined as 80% of state median household income or less. In 2016, the same coalition partnered with Assemblyman Jimmy Gomez to pass Assembly Bill 1550, which expanded the required minimum to 35% of the GGRF proceeds that must be invested in communities who needed them most. The 35% is divided into three parts: a minimum of 25% of projects must be located directly within disadvantaged communities, at least 5% of projects must be located in or benefit low-income communities or households anywhere within California, and at least 5% of projects must be located in or benefit low-income communities and households within half a mile of a disadvantaged community. The remaining 65% of the funds can be spent anywhere in California, including in disadvantaged and low-income communities. However, of the projects that have been implemented to date, 57%[J] have benefitted priority populations—significantly exceeding the minimum 35% requirement.

About

The Greenlining Institute

Founded in 1993, The Greenlining Institute envisions a nation where communities of color thrive and race is never a barrier to economic opportunity. Because people of color will be the majority of our population by 2044, America will prosper only if communities of color prosper. Greenlining advances economic opportunity and empowerment for people of color through advocacy, community and coalition building, research and leadership development. We work on a variety of major policy issues because economic opportunity doesn't operate in a vacuum. Rather than seeing these issues as being in separate silos, Greenlining views them as interconnected threads in a web of opportunity.

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Hana works on the development and implementation of policies leading to clean transportation and mobility investments that will benefit low-income communities of color. She was the lead author of the Mobility Equity Framework, a tool that can be used to maximize equity outcomes and community engagement in transportation planning and decision-making. Hana was also the lead author of Autonomous Vehicle Heaven or Hell? Creating a Transportation Revolution that Benefits All, a report outlining policy recommendations to ensure mobility, health and economic benefits to marginalized communities. She serves on a number of advisory committees for cities, agencies, universities and nonprofits for projects relating to shared mobility and autonomous vehicles. Hana holds a B.A. in sustainability from San Diego State University.

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Leslie Aguayo is an urban planner and advocate with experience in poverty alleviation, asset building, affordable housing, equitable transportation and community outreach strategies using both quantitative, qualitative and ethnographic methodology in an effort to increase upward mobility in urban, suburban and rural spaces. As Environmental Equity Program Manager Leslie works to further equitable electric vehicle policy and investments. She leads Greenlining's transportation equity work, advocating to increase racial equity in transportation planning and investments, implementing the Charge Ahead California Initiative–a law that works to make electric vehicles accessible to low- and moderate-income Californians – and advocating for equitable EV charging infrastructure investments at the California Public Utilities Commission, the California Energy Commission and within the Volkswagen Diesel Settlement. Leslie graduated from the University of California, Berkeley with a Master of City Planning and holds two Bachelor of Arts degrees in Anthropology and Urban Studies from the University of California, Irvine.

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As Legal Counsel with the Environmental Equity team, Román works to ensure that lower-income communities of color have a seat at the table in order to drive climate investments to help improve air quality and economic opportunities within their communities. He believes that communities and their members must be prioritized, engaged and heard. Román grew up near San Diego in National City, two blocks away from the freeway and across the street from a car body shop that regularly violated city codes by sanding, chroming and painting vehicles out in the open. His exposure to these toxic chemicals and pollution inspired him to work on addressing environmental concerns in his community. Román was the Environmental Equity Legal Fellow from 2013-2014 where he worked on SB 535 implementation and the development of the Charge Ahead Initiative, creating pilot programs to increase access to cleaner vehicles. More recently he was Senior Equity Specialist at the Center for Sustainable Energy, where he worked with CSE's renewables and transportation teams. Román received his B.A. from the University of San Diego and J.D. from Thomas Jefferson School of Law.

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Endnotes

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