# BUILDING A DIVERSE, EQUITABLE AND INCLUSIVE CLEANTECH INDUSTRY

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# INTRODUCTION

The Greenlining Institute has advocated for racial and economic justice since our inception in the early 1990's,[1] and we believe that diversity, equity and inclusion should be used as tools for racial justice to benefit low-income communities of color. This report focuses on the need for DEI in the cleantech industry, and particularly on startup companies in this growing field. California's clean energy economy, powered in part by the cleantech sector, is creating good jobs and simultaneously helping the state meet its climate goals. This projected economic growth is ripe for policies, strategies and programs to promote DEI. Throughout this report, we will explore the challenges and opportunities of how small, emerging cleantech companies and their collective industry can advance DEI in their products, services and companies with the ultimate goal of bringing underserved communities to the forefront of the clean energy future.

## Background

Greenlining's Environmental Equity team works to make the benefits of a clean, emerging economy accessible and available to low-income communities and communities of color across California. In 2016, Greenlining's Environmental Equity team became a subcontractor for the California Sustainable Energy Entrepreneur Development Initiative, known as CalSEED, a California Energy Commission rate-payer grant program that funds entrepreneurs who work to bring early-stage clean energy concepts with social impact to market.[2] As a subcontractor, the Environmental Equity team works to ensure that social equity is integral to the entire CalSEED grant program.[3] To achieve this, Greenlining has provided strategies to the early stage CalSEED companies designed to help them embed DEI into the foundation of their companies—so that DEI is not an "afterthought" or a "nice to have," but is normalized and built into the fabric of companies.

## Purpose of This Report and the Intended Audience

This resource guide is a compilation of the key recommendations we have provided to the early stage CalSEED cleantech companies. It is intended for very early stage cleantech startup companies that are working to advance "technology that places an emphasis on environmentally friendly products, services or practices."[4] We acknowledge that many early stage companies may not have a large number of employees or significant financial resources to, for instance, staff a team of DEI experts. However, we believe that there are several DEI strategies that early stage companies can implement from a company's inception, and the recommendations we offer are meant to serve as a starting point to building robust DEI practices in a company. This guide is not intended for utilities, energy service providers, state and local agencies, government or other regulators of energy services.

At Greenlining, we understand that DEI must be a long-term and continual effort that is meaningfully embedded into all aspects of a company, internally and externally. Internally, DEI must show up in the workplace culture, policies and processes inside the company in order to ensure employee and employer well-being. Externally, DEI can be used as a tool to create social impact in cleantech products and services that can help create equitable outcomes for underserved communities. Part I of this guide provides foundational information about DEI in small, early stage cleantech companies by defining key terms and explaining the vital importance of incorporating DEI values and policies at the early stages of those companies' inception. Part II reflects on the challenges currently present for small, early stage cleantech companies and offers strategies for how to advance DEI in startup companies that provide cleantech products and services.

# PART 1: DEFINING TERMS AND CLARIFYING CONCEPTS

## Defining Diversity, Equity and Inclusion

We define the terms diversity, inclusion and equity based on Greenlining's Race Equity Toolkit and DEI Framework.[5,6]

**Diversity** is about the *who*—namely who has a seat at the table and who does not. Diversity acknowledges that we all come to the table with varied sets of experiences, identities and characteristics. In general, our differences can be grouped into three categories:

- **Demographic:** Includes race, age, gender, identity, sexual orientation, physical resources (such as access to land and infrastructure).

- **Experiential:** Includes economic or social position, education, occupation, faith, abilities, dependents, caring responsibilitites.

- **Cognitive:** Includes how people approach problems and think about issues.

**Equity** addresses *justice* and *fairness*. For the purposes of this report, when we discuss "equity" we refer specifically to equity in society (e.g. social and racial equity), not in investments (e.g. shareholder equity). Greenlining defines equity as the redistribution of power and resources in order to identify and eliminate systemic barriers that have prevented the full participation by some groups. To achieve equity in this context requires acknowledging that low-income communities of color have suffered disproportionately from the burdens of the fossil fuel-based economy and require additional support or resources so they can reach favorable outcomes comparable to those of more affluent communities. For startup cleantech company leaders and founders, understanding this history and context means thinking about how their innovations and products can address the clean energy needs of low-income communities of color.

**Inclusion** is concerned with the *how*. Inclusion focuses on the practices, policies and processes that welcome and embrace a diverse workforce. In inclusive workplaces, any individual or group is welcomed, supported, valued, and is able to fully participate. A workplace can be diverse, and yet not inclusive. For example, companies that have diverse employees only in entry level positions might seem diverse at first glance, but as we examine the hierarchy of leadership, the diversity recedes, becoming more White and more male. The lack of diversity across leadership indicates that the company is not inclusive, as not everyone has opportunities to advance in the hierarchy of leadership positions. In short, diversity is just one piece of the puzzle. Companies also need inclusive practices and policies to ensure that diverse perspectives and backgrounds can work in harmony and have equal chances at advancement. Examples of inclusive workplace policies and practices include mentorship opportunities, cultural sensitivity training, anti-discrimination reporting policies and pay equity, just to name a few.

## Why DEI Matters in the Cleantech Sector: the Moral Case and the Business Case

The moral case for DEI in cleantech companies is clear—all communities should have the same access to the health, environmental and economic benefits of a sustainable, clean energy economy powered by the cleantech industry. However, the negative impacts of decades of racist policies like redlining[7] have led to low-income communities of color being restricted from economic growth and wealth creation, and have resulted in the disproportional siting of polluting facilities like oil and gas refineries and emissions-generating infrastructure like highways in or around low-income communities of color.

Thirty-two years after the publishing of the Toxic Waste and Race Report[8]—which marked the birth of the environmental justice movement in the U.S. by documenting and exposing massive disparities in the burden of environmental degradation and pollution facing low-income communities and communities of color—many of the same environmental disparities persist. Today, people of color are much more likely to live near sources of pollution and to breathe polluted air.[9] Collectively, this disproportionate exposure to pollution leads to higher rates of asthma, cancer and other pollution-related health impacts. The cleantech industry can help create healthier environments for communities suffering the most from environmental burdens by designing cleantech innovations, products and services that provide meaningful and direct benefits to low-income communities of color. And a diverse workplace can help these companies get there.

In addition to the moral case, the business case for DEI is stronger than ever; a diverse and inclusive workplace can be a source of competitive advantage for companies.

## Diversity Leads to Innovation that Expands the Consumer Base:

A 2017 PolicyLink Report, The Competitive Advantage of Racial Equity, found that many companies experienced increased profits and growth when the company culture and structures focused on diversity, inclusion and growth models that benefit society.[10] Recognizing that many states, including California, Texas, Arizona and Hawaii, are already majority people of color, and that the country as a whole is projected to be majority people of color by 2045, the report discusses how a focus on DEI is imperative in order to innovate and create products and services that serve a more diverse consumer base and to cultivate a strong workforce.[11] A diverse team can meet the needs of a more diverse audience, creating a larger consumer base. For instance, Nike created an innovative campaign strategy in 2013 when it launched the "Corre por tu barrio," (run for your neighborhood) campaign; the company grew its consumer base and brand loyalty by mobilizing Mexico City communities to participate in athletic competitions.[12]

## Diversity Enhances Problem-Solving and Can Increase Revenues:

Research has shown that the more diverse a team is, the more easily it can solve problems, achieve higher revenues, and have greater market shares.[13] In fact, a recent report by McKinsey & Company that analyzes 1,000 companies across 15 countries shows that the most diverse companies are more likely than ever to outperform non-diverse companies on profitability:

- Companies in the top quartile of racial diversity outperformed those in the fourth quartile by 36% in terms of profitability in 2019, an increase from 33% in 2017 and 35% in 2014.[14]

- Companies in the top quartile of gender diversity on executive teams were 25% more likely to experience above-average profitability than peer companies in the fourth quartile, an increase from 21% in 2017 and 15% in 2014.[15]

- Racial diversity continues to have a stronger impact on financial performance in the United States than gender diversity, perhaps because earlier efforts to increase women's representation in the top levels of business have already yielded positive results.[16]

- Companies in the bottom quartile both for gender and race are statistically less likely to achieve above-average financial returns than the average companies in the data set.[17]

For early stage cleantech companies, now is the time to put DEI at the center of business strategies to increase innovation and financial performance, to help shape the future of the cleantech industry to be diverse and equitable, and to bring clean energy benefits to people who need them the most. Moreover, recognizing the demographic changes the United States will continue to experience, early stage companies should recognize that the corporate stakeholders of the future will predominantly be people of color.[18]

# PART 2: THE BARRIERS TO DEI IN CLEANTECH AND RECOMMENDATIONS FOR ADVANCEMENT

While it is well documented that diverse, equitable and inclusive teams and workplaces are better for the bottom line of a business and help foster innovation,[19] the broader cleantech industry still struggles with advancing DEI. More recently, the triple and intersecting crises of COVID-19, uprisings for racial justice, and climate change are putting a new spotlight on race-based inequities that have been present in our systems and institutions for centuries.

With the current change of tide, it is as timely and relevant as ever to reflect on the challenges facing small cleantech startups when it comes to advancing DEI. Part two of this publication explores barriers to advancing DEI in small cleantech startups and offers recommendations on how to overcome these barriers. We look at barriers facing the industry in the following categories: workforce and leadership diversity, workplace culture and access to products.

## Barriers to Workforce and Leadership Diversity in Cleantech Industry[20]

While there does not appear to be data about small cleantech startups specifically, the cleantech industry generally is emerging as a growing source of employment in the U.S.[21] According to a report from the Environmental Defense Fund on the future of the clean energy workforce, the U.S. employs more than four million workers in the clean energy and sustainability industries, with solar and wind industries leading the way.[22] According to the Bureau of Labor Statistics, solar photovoltaic installer jobs are projected to grow 51% over the next decade, which makes it one of the fastest growing jobs in the country.[23] While the specific career pathways and wages differ between large scale utility and rooftop installers,[24] in general the sector provides local jobs that pay liveable wages.,[25,26] The projected growth of the industry and its ability to train and employ people means that cleantech as a whole has a lot of potential to create wealth and jobs, especially for low-income communities and communities of color that need good jobs and opportunities for long-term wealth building.

While the quality of solar photovoltaic installer jobs offered is laudable, it is important to pay attention to who fills those roles currently. Unfortunately, when it comes to diversity and inclusion in the solar industry workforce, the industry lags behind, and its workforce and leadership demographics do not reflect the population it serves. In 2019, the solar industry's workforce was 73% White, 17% Hispanic or Latino, 9% Asian and 8% African American, according to a report from the Solar Foundation.[27] By comparison, the country is 62% White, 18% Hispanic or Latino, 13% African American and 6% Asian, according to the Census Bureau.[28] The lack of diversity becomes more pronounced at the senior executive level in the solar industry, with 88% of executives being White.[29] Similarly, in 2018, the overall U.S. wind industry workforce—the second leading clean energy industry in terms of jobs—was 69% White, according to a 2019 report from the National Renewable Energy Laboratory.[30]

The current state of the U.S. economy is woefully inequitable, and the racial wealth gap is widening.[31] Moving forward, we must ensure that jobs across all levels of leadership in the cleantech industry are accessible to low-income communities and communities of color.

## Recommendations to Increase Workforce and Leadership Diversity

Ultimately, the demographics of employees at every level of workforce and leadership in small cleantech startups should reflect the demographics of the community in which those startups are located and/or the demographics of the markets that those startups serve.

### A. Broaden Your Recruitment Strategies

1. Look beyond your own internal networks to search for candidates. Promote open positions in places where diverse candidates will see them. Look for employees from nontraditional sources including coding camps, vocational training programs, community colleges, meetup groups, newsletters and nanodegree programs.

2. Network to build relationships with diverse communities. These relationships can help you to connect with diverse potential candidates. Remember that networking can happen anytime and anywhere. To this end, consider these resources:

   a. Professional organizations representing diverse BIPOC groups such as the American Association of Blacks In Energy,[32] the National Action Council For Minorities in Engineering,[33] and Women of Renewable Industries and Sustainable Energy.[34]

   b. Diverse affinity groups across colleges and universities.

   c. Conferences, seminars, job fairs and networking events.

   d. Online professional social networking sites such as LinkedIn and Facebook. Search for the women and BIPOC subgroups within these online and social media communities to maximize your outreach potential to target diverse groups.

### B. Write Inclusive Job Descriptions

1. The goal of a job post is to attract the right candidates. To attract the right, diverse candidates, avoid using limiting and biased language and communicate a growth mindset. Minimize references to perks that may appeal only to young, male, White applicants in the jobs page, like company retreats in exotic locales or sports outings. Test the language you use with a diverse group of individuals before you post to help highlight blind spots you otherwise might miss. Additionally, make it clear that you welcome candidates who have the necessary skills and are eager to learn and grow. Companies that invest in the growth and development of their employees are more likely to attract diverse candidates.

### C. Remove Bias From Resume Evaluation

1. Research shows that the hiring process is biased.[35] Conscious and unconscious bias, racism, ageism and sexism all play a role in who gets hired, which is unfair and part of the reason why the tech sector is struggling with DEI. Instead, focus on a candidate's specific qualifications and skills rather than demographic characteristics. Consider using technology to remove personally identifiable information from job application materials, but be aware that automated resume review software is vulnerable to unintended racial bias.[36] Studies have shown systemic unintended bias when reviewing resumes that are identical with the exception of names that signify a racial background, gender or a resume entry that signifies LGBQT+ status. At the same time, companies should make long-term and ongoing efforts to change how and why bias happens though training and further education. See below for recommendations on bias training.

## D. Develop and Use an Inclusive Interview Process

1. Think about who is conducting the interview. Your interview committee should reflect the demographic of the workplace. Misrepresenting your workplace diversity by putting all of your diverse staff on the interview committee is a false representation of your company dynamic.

2. Use structured interviews, ask the same standard questions and make them applicable to the type of role you are filling. Be prepared with flexible, open-ended questions that permit more than one answer, providing an opportunity to see how candidates think through problems and solutions. Example of inclusive interview techniques include:

   a. Use a scorecard: Use an interview scorecard that grades candidates' responses to each question on a predetermined scale. The goal here is to remove or minimize bias from the interview process by allowing the interview to become an independent data point along with the resume and CV evaluation.

   b. Give a work sample test: Work sample tests that mimic the kind of tasks candidates will be doing in their role are a great way to evaluate a candidate's future job performance. Work samples allow employers to not only critique a candidate's quality of work independent of their appearance, gender, age and personality, but also to compare the quality of work between different candidates to help find the right fit.[37]

## Barriers to Creating an Inclusive Workplace Culture

Having a diverse workforce is not enough; small cleantech startups must also work to make sure their workplace culture, systems and processes are inclusive and fair in order to welcome and embrace the diversity of experiences, backgrounds and perspectives.

Racial and gender-based bias that results in non-inclusive workplaces are systemic issues that are in part to blame for the broader tech industry's lack of diversity.[38] Women and people of color are more likely to encounter negative stereotypes and unfair treatment in the tech workplace compared to their White counterparts.[39] While there does not appear to be specific data about small cleantech startups, a 2017 report on who leaves the tech sector and why by the Kapor Center for Social Impact identified unfairness and mistreatment in the workplace as the primary reason for turnover among underrepresented groups, with men of color most likely to leave their job, and with nearly 40%[40] of all those who left citing these factors as the reason for leaving their job. Furthermore, the report found that underrepresented men and women of color experience

stereotyping at twice the rate of their white peers, and that LGBTQ+ folks who left the tech sector reported bullying and public humiliation at significantly higher rates than other underrepresented groups.[41]

While the examples provided in this section are not cleantech examples specifically, we cite them to highlight how the broader tech sector illustrates what happens when a nascent industry does not center DEI in its mission, goals, processes and practices. Consider this a call to action for early stage cleantech companies to learn from the mistakes of the broader tech industry.

Racial and gender-based biases are deep and systemic problems that work against people of color and underrepresented groups in a company's workplace culture, systems and processes. In the long term, the lack of diverse staff and an inclusive workplace culture able to support and retain them result in the lack of inclusive products and services that fail to meet the needs of people of color and/or actively harm them.

## Recommendations to Create Inclusive Workplace Cultures, Processes and Systems

Retaining diverse staff means that you must foster an equitable and inclusive workplace culture, systems and processes in order to make everyone feel welcome and genuinely included.

### A. Make Inclusion a Collective Responsibility

1. The Greenlining Institute has long believed that corporate leaders must take responsibility to ensure a diverse, inclusive and equitable workplace. A CEO's commitment to DEI programs is critical to the success of those programs and practices. Commitment from leadership means that the hiring process, company culture and employee experience will be prioritized to successfully achieve a diverse and inclusive workplace. Additionally, the commitment must be embraced by everyone in the workplace for it to be effective—from the CEO to the head of HR to entry level employees and interns, inclusive workplace systems and processes must be agreed upon and embodied by everyone in the company in order to effectively build culture, set boundaries and expectations of behavior.

2. Make your commitment to DEI visible to the public by developing a social impact statement that shares your company's values and vision for promoting social, environmental, economic and health-related values. A social impact statement will also help hold your company accountable to prioritizing and working towards the social impact goals you set out to achieve. In developing a social impact statement, be explicit about who you're

trying to help, why you're working on a particular issue and how you plan to achieve the impact. A social impact statement will generally include qualitative commitments like the company's values and priorities, along with information and statistics about current progress (once there is progress to report).[42]

a. For example, Power52 Energy Solutions, a for-profit corporation that focuses on developing, financing and constructing clean energy solutions, helped fund Power52 Foundation, an organization dedicated to training and employing at-risk individuals in the clean energy industry. Power52 Foundation's mission is to provide "employment training for at-risk adults, returning citizens and underserved individuals living in Baltimore City and surrounding counties that prepares participants for careers in the solar industry as well as other green job opportunities."[43] Power52's programs "generate 100% solar power that will benefit low-mid income residents with a focus on turning community centers into resiliency hubs, offering disaster relief support to their neighboring communities. These facilities are built directly in the communities they serve by the residents living there."[44]

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**Here is an initial template you can use to start thinking about social impact statements:**

We will _____(impact to be achieved)_____
by _____(how you're going to do it)_____ .

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## B. Establish DEI Training Programs for All Employees

1. DEI training is important for building workplace culture. Research shows that overall, diversity and inclusion are not built into tech industry culture, requiring a fundamental shift in behavior.[45] While engaging with DEI topics and concepts can be challenging and uncomfortable, companies must devote time and resources for training to teach employees how to be inclusive and how to handle potential challenges related to inclusive practices. Here are some recommendations to carry out DEI training effectively and responsibly:

    a. Make sure that DEI trainers have extensive knowledge and expertise on the subject matter. We strongly recommend working with DEI trainers who represent the diversity of employees in your company, including racial and gender diversity.

    b. DEI training should be ongoing, proactive and specific because learning about DEI is a continuous journey, and this belief should guide your DEI training initiatives.

    c. The training should not only be for middle management. Senior managers and executives must be trained as well to show that diversity and inclusion are a priority and that those in leadership take it seriously.

    d. Training should focus on specific approaches to working in an environment with diverse teams. Topics for such training could include hiring, promotion, performance review, cultural sensitivity, communication, feedback and unconscious and conscious bias. As each company is unique, nuanced discussions to explore grey areas, realistic hypotheticals and company/industry-specific topics will provide better guidance than generic materials or lists of do's and don'ts.

## C. Compensate and Promote Fairly

1. As your company grows, make sure you have clear processes and systems that promote fair and transparent compensation and promotion. Compensation disparity between underrepresented groups and their White male colleagues is a particularly prevalent issue.[46] The first step to compensating fairly is understanding that underrepresented groups, including people of color and women, are often under-leveled not only at their current job, but also when they change jobs. Hiring underrepresented groups at a lower level than their previous job is a red flag suggesting you are very likely starting them off in a lower salary band than they deserve. At the offer stage, it is critical to do a check to make sure the offer you make at least equals the last offer you gave to a White male at that level.

2. Compensation reviews: regularly review employee compensation and promotion to evaluate for disparities among employees across similar roles and responsibilities.

3. Promote a culture of transparency around compensation: Consider publishing salary ranges by the type of role or level of responsibility and standardize other types of compensation such as bonuses. A study from the city of Boston found that in industries that lacked standardized methods for compensation and where there was limited information or knowledge of salary negotiation range, women who recently graduated with MBAs received salaries that were 10% lower than male classmates with similar skills and experience. However, in industries where salary ranges and standards were clear, male and female MBAs earned the same.[47]

4. Compensation encompasses more than just salary. Remember that benefits like sick leave, paid time off, maternity/paternity leave, health insurance and a retirement plan are not just something to mention in job descriptions but also constitute an economically vital part of the compensation package.

## D. Share DEI Values and Vision with Investors

1. As a company grows, founders and CEOs must make sure they communicate their DEI commitments and goals with potential investors and ask them about their DEI commitment. In building these relationships, we recommend asking investors about the diversity of the investing team as well as their portfolio of founders and what percentage of them are entrepreneurs of color. Recently, more private and public funders have started to require social impact as a criterion for investments in companies.

   a. For instance, Kapor Capital, the venture capital investment arm of the Kapor Center for Social Impact, based in Oakland, California, has started to invest exclusively in companies that not only have potential for financial returns, but also have potential for large-scale social impact.[48] They have an initiative called the Founders Commitment, which aims to incentivize startups to include diversity and inclusion in their companies from day one. Companies that sign the commitment agree to establish and meet diversity benchmarks.[49]

## Barriers to Accessing Cleantech Services and Products

While clean-technology products and services have the potential to bring health and environmental benefits to low-income communities and communities of color that need them the most, many of these communities still lack access to tech innovations that could vastly improve their quality of life. For our purposes, accessibility is the extent to which cleantech products and services are usable and available to people from the widest range of backgrounds and capabilities.

Many cleantech products and services in the energy, transportation, water and other sectors are perceived by low- to moderate-income communities as luxuries for those in high-income brackets rather than attainable necessities that can improve their everyday lives.[50] While the benefits of clean technologies are apparent, they are often not designed to meet the needs of people whom they could benefit the most.

The benefits of cleantech innovations should spread beyond the usual set of customers and better consider: people living in older, multifamily buildings; renters who may not have an incentive to invest in energy efficiency technologies for property that they do not own; how energy efficient technology that relies on an internet connection is not accessible to those without access to broadband;[51] or the mobility needs of people in under-served neighborhoods who often have the longest and most expensive commutes.[52] This is by no means an exhaustive list of access barriers, but illustrates that if the cleantech industry wants to develop products and services that are truly accessible to and benefit everyone, it has to identify and deploy solutions to fit specific community needs.[53] Doing so will increase the adoption of cleantech innovations by a more widespread consumer base.

## Recommendations for Small Cleantech Startups to Promote Accessible Cleantech Products and Services

As leaders, designers and entrepreneurs of small cleantech startups, you shoulder a responsibility to create products that reflect the needs of all users—no matter who they are, where they live or how much income they earn. Thinking about how you will address the specific needs of underserved communities from the beginning of product development will be more efficient and effective than doing so at the end, when it may be difficult to make significant changes. The strategies below can help start the process of identifying community needs and including them in your cleantech innovation.

### A. Learn About the Needs of Underrepresented Populations

1. Work on forming partnerships with local community groups that work on issues related to your cleantech innovation to help understand how the community can benefit from your innovation, and to help increase your customer base to a larger, more diverse demographic of customers. Community-based organizations are nonprofit groups that work at the community level to improve quality of life for residents by providing direct services in areas such as healthcare, energy efficiency services and more. Working at the community level means that CBOs already have trusting relationships with key figures in the community and understand the community's needs. As such, CBOs can provide community engagement expertise and help your company to cultivate trust with the community, which is important for meaningful and long-lasting partnerships. We recommend building partnerships with CBOs that work with underrepresented communities to better understand the specific access barriers these

communities experience. These can include low-income communities, communities of color, rural communities, immigrant communities, access and functional needs communities and other underrepresented populations. In a nutshell, partnering with CBOs is a great way for your company to learn how to keep improving your innovation and increase market demand for it by taking community considerations into account, allowing for your product to fit market needs in a targeted way.

a. Here are some examples of how to approach this: Attend community and city hall meetings to learn what the most pressing issues are in the community. Attend conferences and green job fairs in underserved communities, spreading information about your presence in the community by giving presentations and handing out brochures and pamphlets about your presence and work in the community. For example:

i. GRID Alternatives, a national solar nonprofit, has a variety of different partnership models including corporate partnerships, job training partnerships, local government and municipal partnerships and utility partnerships.[54] Once a year, GRID hosts an annual Solarthon event,[55] which is a fundraiser and a solar block party that brings job trainees, community leaders, individual donors and corporate sponsors together to install multiple solar systems in one community. Events such as this allow different stakeholders from the community to come together and connect while contributing to GRID's mission of making solar technology accessible to disadvantaged and low-income communities.

ii. The California Environmental Justice Alliance is a statewide coalition of grassroots, environmental justice organizations that work to achieve environmental justice by advancing policy solutions. CEJA hosts its annual Congreso each summer, an event with workshops and trainings at which you can learn about pressing environmental and energy justice issues impacting low-income communities of color,  become familiar with local and national environmental justice victories, and network and build relationships with CEJA members, allies and powerful community leaders across the state who are working on environmental justice.[56]

b. To better understand blind spots around product usability, conduct focus groups and surveys with diverse groups of people to test out your product. Thinking about how to make your product accessible to underrepresented groups in the early stages of the product development will be easier than at the end when it can feel like you're trying to fit square pegs into round holes.

3. Deploy your technology in a disadvantaged community[57] through a pilot project so that residents can benefit from the innovation's environmental, health and socioeconomic benefits while providing useful feedback. While early adopters can provide feedback that helps engineers and designers improve their innovations, early adopters of innovative products or technologies often tend to be affluent, White and male.[58] By first deploying your technology in a disadvantaged or lower-income community, you will be able to receive important feedback about the specific needs and challenges that low-income communities face in adopting cleantech products that can inform how you improve the innovation.

a. For example, understanding that low-income and disadvantaged communities are often located next to polluting facilities and thus experience disproportionate exposure to pollution, the Los Angeles Cleantech Incubator established pilot projects to improve air quality and provide zero emission mobility options to underserved Los Angeles communities through the Transportation Electrification Partnership.[59] For one such project, the city of Long Beach, the Conservation Corps of Long Beach[60] and one of LACI's portfolio startup companies, URB-E,[61] will work together to launch a zero emission e-cargo bike pilot in disadvantaged communities with the goal of reducing greenhouse gas emissions, testing the feasibility of off-grid charging, and providing training and green job opportunities for at-risk youth.

### B. Build Inclusive Outreach and Marketing Strategies

1. Inclusive marketing embraces diversity and inclusion by elevating the stories and experiences of people from different backgrounds, with varied perspectives, physical and language abilities, ages and income levels. From a business perspective, inclusive marketing will allow your brand to expand its reach and find new customers. Think about your chosen methods of marketing: Will they allow you to reach groups that are underrepresented historically? If not, how will you change your strategy to be more inclusive?

   a. Inclusive marketing starts with diversity of thought and cultural awareness within the marketing team. As such, hire professional marketing firms owned and led by Black, Indigenous and People of Color (BIPOC) in order to reach diverse and historically underrepresented groups. Diversity and inclusivity must be embedded in all aspects of the marketing process, from the ideation stages of a campaign through the review of campaign performance, in order to meaningfully and thoughtfully engage and target underrepresented groups.

   b. If hiring a marketing firm is not in your budget, consider partnering with CBOs or local utility providers, entities that already have established relationships with local communities and understand their needs. Once you have established relationships with these groups, leverage your relationship to conduct culturally relevant marketing campaigns and outreach. For example, if you are marketing your product or service to immigrant communities, think about whether or not they have access to traditional advertising venues such as cable television. Instead, think about crafting radio advertisements in relevant languages broadcast on popular ethnic radio stations.

### C. Measure Your Progress: Intent Does Not Create Impact

1. Simply designing products and technologies with the intent to be inclusive is not enough. Develop systems and processes to evaluate your products' impact to ensure that the social, health and economic impacts you create are dispersed equitably among all of your users. Companies should track data on who benefits from the technology and which populations are left out, and devise strategies to address any gaps.

   a. For example, the Center for Data Science and Public Policy at the University of Chicago advocates equity audits for new technological innovations. They recommend developing different components of equity metrics and measuring each component to identify gaps to effectively address each equity criteria.[62] The group recently launched Aequitas, a toolkit that allows practitioners and policymakers to audit machine learning models for biases and discrimination.[63]

# CONCLUSION

Today, cleantech products and services such as LED light bulbs, solar technology and electric vehicles are ubiquitous in our everyday lives. The cleantech industry is increasingly powering livelihoods and economies across the globe and creating innovations and services that impact people's lives. By explicitly and intentionally focusing on advancing DEI in small cleantech startups, we have the potential to bring real economic, health, environmental and social benefits for historically underserved communities. Ensuring a diverse representation of underrepresented groups in the small cleantech startup workforce, coupled with inclusive workplace practices and policies to maintain them, will help ensure the technologies and products of the future are being shaped by the voices and perspectives of communities of color and underserved communities everywhere.

# ACKNOWLEDGEMENTS

## 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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## Endnotes

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