



# GREEN JOBS REPORT

Creating A Green Workforce:  
Community-Based Solutions  
for a Diverse Green Jobs Sector





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## INTRODUCTION

**The intersection of COVID-19 and climate change serves as a unique and existential reflection point for environmental justice communities.**

Both crises disproportionately affect people of color and low-income communities, exacerbating and intensifying the ways racism, housing injustice, and lack of access to essential resources leave millions vulnerable and exposed. Both crises also have altered business, industry, and the workforce as we know them, and the magnitude of these shifts will have drastic and long-lasting impacts.

Just as we've seen during the COVID-19 pandemic, continued dependence on fossil fuels poses the greatest threat to people of color and low-income communities, and they will bear the brunt of the harms and adverse outcomes. So in our work to slow climate change and transition toward a more sustainable future, how can (and should) environmental justice communities actively shape and influence the potential of the renewable energy sector?

The communities most affected by disinvestment, climate change, and generations of environmental degradation must be bettered by the career opportunities and cost-savings promise of the renewable energy sector. To this end, many areas of the United States have adopted the Just Transition framework, which assesses the current and future needs of regions, communities, civil society, and local governments; Green Jobs training/retraining, counseling, recruitment, and STEM and Occupational Safety and Health Administration (OSHA) courses are some of the actions and interventions considered in the Just Transition approach.

The feedback and insights in this report were gleaned from examining the Just Transition framework and conducting interviews with leaders from The Deep South Center for Environmental Justice, the Green Door Initiative, GRID Alternatives, and WE ACT for Environmental Justice.

Three of these nonprofits are members of the Environmental Justice Leadership Forum (EJ Forum), a member-driven coalition focused on addressing systemic racism and resolving environmental injustices.

Founded in 2008, EJ Forum organizations recognize that training is a vital factor to ensure that people can obtain quality jobs in wind, solar, and similar industries, and they are working to create, refine, and conduct Green Jobs training that benefits individuals, communities, and the environment itself.



***How can environmental justice communities actively shape and influence the potential of the renewable energy sector?*** ”



# EXECUTIVE SUMMARY

**The Environmental Justice Leadership Forum finds that the intersection of the COVID-19 pandemic and climate change serves as a unique and existential reflection point for environmental justice communities...**

- ▶ At this moment, when we take in the outsized and more injurious impact that this coronavirus has had on the most vulnerable communities, the embodiment of past policies and practices is personified and realized in a stark, painful and undeniable fashion — there is context for the disproportionate incidence of heart and lung disease that make COVID-19 more dangerous and lethal in communities of color, we see how low-income communities, both urban and rural, are struggling to meet this moment given long-established health inequities and lack of access to healthcare.
- ▶ Across these years and months, we have been overwhelmed by the pace, frequency and scale of extreme weather events, and the calamity that these wildfires, hurricanes, tornados, etc. leave in their wake; millions are trying to protect themselves from microscopic viral threats while breathing thickened air, squinting through orange skies and trying to contend with heightened risks of mold in increasingly hot, humid conditions.
- ▶ When individuals, households, enterprises and organizations must think about and employ physical distancing and other health-related protections, we must confront the many manifestations of climate gentrification that transforms and defines communities, and we also are challenged to scrutinize our built environment and ask whether it's sufficiently adaptable and well suited to serve us and the planet as a whole.
- ▶ There is a growing understanding that climate change requires a full governmental response. In this election year especially, we are hearing candidates at various levels highlight fenceline communities, climate mitigation and resiliency, equitable development, the Green New Deal, and the imperative to transition to renewable energy sources, for the sake of both the economy and the environment.
- ▶ During this historic period of racial justice examination and demonstration, we are coming to understand that environmental discrimination and racism are deeply embedded forms of structural and institutional injustice that demand reckoning, attention and action.

But even in light of difficulties and devastation, at this very intersection, there is an opportunity to better the communities most affected by disinvestment, climate change, and generations of environmental degradation through career opportunities and the cost-savings of the renewable energy sector.

This report considers how a Just Transition framework can serve to shape conversation and next steps in addressing climate change. Rooted in an ethos of parity and collaboration across occupations, race, socio-economic status and sectors, its foundational premise is that a healthy economy and a clean environment can and should coexist, and the individuals and communities that have been most impacted by the legacies of environmental harm and would be most affected by shifts in the energy industry should be the first to access and experience the myriad benefits of a green energy economy and country. With a Just Transition lens, there is greater assurance that environmental discrimination and racism, and existing, climate-related socioeconomic inequalities, can be recognized and reconciled.

In this vein, this report also highlights the state of affairs and best practices of four organizations who have active, evolving Green Jobs training programs designed for people of color and individuals from at-risk, underserved communities. Through the practical and experiential insights of Deep South Center for Environmental Justice (Gulf Coast region), Green Door Initiative (Michigan), GRID Alternatives (California, Colorado, the Mid-Atlantic region, and Indigenous communities nationwide)

and WE ACT for Environmental Justice (West Harlem, New York), we learn about work that's already taking place on the ground, the resources needed to carry forth this work, and ideals for how to magnify and elevate this work in the future and bring more underrepresented groups into the renewable energy sector. As America continues to learn about itself, and its citizens awaken to its inequities and the implications of its actions (and inaction), it is critical that we recognize the people who have been engaged in this work for decades prior to this widespread awareness, and we must ensure that these leaders and visionaries have a seat at decision-making and policy tables: It'd be foolish, hubristic, ill-informed and shortsighted to disregard the firsthand knowledge of these organizations, especially during a time when the concept of inclusion begs to be manifest beyond mere lip service, and exclusion can harm and hinder progress.

After presenting research that dives into the environmental harms of fossil fuel dependence, highlights the potential of renewable energies, and confirms the promise and possible pitfalls within the green energy job industry — one of few employment sectors whose growth potential is steadfast in the face of the COVID-19 pandemic, and a sector which many analysts and researchers cite as key to driving post-pandemic recovery and job growth domestically and around the world — the report outlines key recommendation areas that are deemed essential to improving diversity within the renewable energy industry and ensuring that individuals from overlooked, disinvested and imperiled communities are well positioned to take on employment opportunities:

### **A JUST TRANSITION SCREEN FOR U.S. LEGISLATION**

**Intention must drive change, and assessing laws through a Just Transition prism that encompasses principle, process and practice, and sees each of these facets as commensurate and coexistent with one another, can ensure that legislation has the vital components necessary to both combat climate change and ensure economic stability and good-paying jobs. The proposed screen identifies seven steps:**

- ▶ Earmark funds to support workers who transition from fossil fuel to renewable energy sectors
- ▶ Protect pension funds
- ▶ Provide health insurance
- ▶ Establish an advisory board comprised of community members and workers to discuss and evaluate energy transitions
- ▶ Remedy the environmental damage caused by the industry and/or facility
- ▶ Repurpose abandoned facilities and sites
- ▶ Maintain/continue funding transition work in communities

### PERSONALIZED, CALIBRATED MEASURES TO SHAPE GREEN JOBS TRAINING PROGRAMS

As the renewable energy sector increasingly becomes more competitive, attracts a wide range of talent and seeks specialized skill sets, it can become increasingly difficult for disadvantaged individuals who come from disadvantaged circumstances to access emerging prospects. The highlighted programs purposefully and deftly address circumstances such as insufficient/subpar educational attainment, criminal justice-involvement, and lack of tangible, intangible and financial resources

that meet trainees where they are and best position them to enter the job market. Interventions and actions may include paying for OSHA training cards; subsidizing transportation to/from training sites; connecting trainees to wraparound services that can meet their most exigent needs and help provide stability for their households; and connecting trainees to individuals and institutions that can provide tutoring, and remedial, secondary and technical learning opportunities.

### IMPROVED RELATIONSHIPS WITHIN AND AMONG KEY GROUPS AND STAKEHOLDERS

This notion may sound simplistic, but it's a critical underpinning to advancing racial justice work, specifically, and with respect to increasing diversity within the green energy economy, specifically. The interviewed leaders believe that establishing apprenticeship programs and direct talent pipelines with construction companies is critical to diversifying the industry and making sure that Black and Brown communities don't experience the overt discrimination that has characterized such industries in the past. As government funding becomes less dependable and more stretched during this COVID-19 pandemic, Green Jobs training programs could benefit from increased fiscal support and sponsorship from philanthropy and the private sector; many pointed specifically to endowment funds as a means of supporting work across a long term. Additionally, relationship-building

must happen within organizations to ensure that individuals have the mental and emotional foundation to move confidently into these Green Jobs spaces — mentorship, modeling, coalition-building and social justice framing help trainees connect to a mission outside of themselves, and therein, power the environmental justice movement.

The United States is ready for a new chapter. People are ready for new pathways to sustainable prosperity. Collectively, we need new means and modalities to realize a 21st Century existence, and Green Jobs and the renewable energy sector, pointedly, and the green energy sector, broadly, offer a means to improve climate conditions, emerge from one of the most challenging periods in our lifetime, and achieve the possibility and promise of better days to come.



# SECTION 1

## ENVIRONMENTAL HARMS: DEPENDENCE ON FOSSIL FUELS AND ASSOCIATED OUTCOMES

**The United States has long depended on fossil fuels to drive its economy. The resultant increase in greenhouse gas emissions threatens Earth's climate by way of the greenhouse gas effect. Vulnerable communities are threatened because they are disproportionately exposed to pollution. And given that fossil fuels are exhaustible resources, job stability and energy prices are threatened. All of these factors exacerbate issues of environmental inequity.**

### A AIR QUALITY

There is an unprecedented amount of evidence that links fossil fuel use to air pollution. Additionally, it is well documented that underserved populations are more likely to live in close proximity to sources of pollution. As a result, people of color and those in low-income communities experience negative health outcomes such as higher rates of asthma and heart disease.<sup>1</sup>

#### COAL

In 2019, the U.S. Energy Information Association (EIA) found that 63 percent of the country's energy production came from burning fossil fuels; of this, nearly 966 billion kilowatt hours (kWh), or 23.5 percent, comes from burning coal.<sup>2</sup> According to the National Association for the Advancement of Colored People (NAACP), nearly "six million Americans live within three miles of a coal power plant...[and] coal power plants tend to be disproportionately located in low-income communities and communities of color."<sup>3</sup> Exposure to chemical by-products (ex. sulfur dioxide, nitrogen oxides, particulate matter,

mercury, uranium, arsenic, and lead) can lead to respiratory illness and heart disease<sup>4</sup> — in heavy coal-producing states (Texas, Ohio, Indiana, Pennsylvania, Illinois, Kentucky, West Virginia, Georgia, North Carolina, and Missouri), these chemicals have been linked to increased rates of lung cancer.<sup>5</sup>

#### NATURAL GAS

The largest share of U.S. fossil fuel energy production (34.8 percent) comes from natural gas.<sup>6</sup> While natural gas typically emits 50-60 percent less carbon dioxide than coal, there are dangerous and environmentally damaging consequences to its extraction via hydraulic fracturing (i.e. fracking).<sup>7</sup> To release gas and oil from shale deposits, water and chemicals are injected at a high pressure, and the subsequent fracking fluid can contaminate underground water supplies, or return to the surface and spill over into nearby rivers and streams.<sup>8</sup> Numerous studies by Duke University, ProPublica, and the U.S. Environmental Protection Agency (EPA)



have found that communities near fracking sites are at higher risk of drinking water contamination and property damage.<sup>9</sup>

Furthermore, the pipelines used to extract and transport natural gas can leak methane, a greenhouse gas 34 times more potent than carbon dioxide. Methane contributes to both global warming and ground-level ozone, which can cause respiratory issues.<sup>10,11</sup>

Formaldehyde and benzene often are emitted in tandem with methane, and these toxic chemicals are linked to increased rates of cancer, as well as neurological and reproductive damage.<sup>12</sup> Methane is loosely regulated in the United States, and in 2019, the Trump Administration EPA issued a Proposed Rule that would release oil companies from any obligation to install methane-detecting technology.<sup>13</sup>



## **B** CLIMATE IMPACTS

Climate change will significantly alter energy production, delivery, and consumption in the United States, and potentially set off a chain of interrelated, compounding influences that further imperil the land. For example, as the atmosphere warms, Americans will become more reliant on air conditioning and use more electricity. Increased amounts of water are necessary to cool coal- and oil-fired power plants, which will strain water resources across the Southwest and Southeast. Water resource strain also will

make it difficult to meet electricity demand. Power plants are often located near coastal areas that are sensitive to sea level rise and storm surge, which destabilize their operability. Power outages can cause oil and gas pipelines disruptions.<sup>14</sup>

Taken together, these factors will make existing energy infrastructures less reliable. To compensate, more fossil fuels will be consumed, worsening climate change and multiplying climate risks.

## C ENERGY BURDENS

A major concern for renters and homeowners is the increasing cost of powering their homes. Nationally, low-income households spend a larger portion of their earnings on home energy costs (e.g. electricity, natural gas, and other fuels), a phenomenon defined as “energy burden.” A recent study found that low-income households face an energy burden three times higher than other households.<sup>15</sup>

Numerous factors contribute to energy burden. Commonly reported causes include inefficiencies tied to poor insulation, air leaks, heating systems, and appliances; inability

to control or have input about systems and furnishings (e.g. in rental households); and lack of information about relevant energy efficiency programs and conservation measures.<sup>16</sup>

One in three U.S. households has trouble paying energy bills.<sup>17</sup> An American Council for an Energy-Efficient Economy report stresses that this financial burden negatively impacts the health and welfare of families, forcing them to juggle high utility bills and other costly expenses, and creating economic hardship that makes it difficult for these families to emerge from poverty.<sup>18</sup>



## D JOB INSECURITY

Though environmental regulations are often (inaccurately) cited as the reason for diminishing jobs in the coal and natural gas industries, it is the adoption of automation that has impacted mining and manufacturing employment. The shift to open-pit mines

avored automating tasks that had been done by humans — a Brookings Institution report states that, “between 1980 and 2015, underground mining’s share of total coal production dropped 41-35 percent, while surface mining production increased from 59-65 percent.”<sup>19</sup>



# SECTION 2

## RENEWABLES AS A VIABLE SOLUTION

The advantages of renewable energy go beyond the environmental improvements. There are also economic benefits in the form of job creation. According to the International Renewable Energy Agency, since 2017, renewable energy has employed 10.3 million people worldwide.<sup>20</sup> A recent and timely Clean Jobs America report examining the impact of COVID-19 found that there are nearly 3.3 million energy workers in the United States, and the clean energy industry has experienced growth for five consecutive years. Currently, the solar industry employs more than 345,000 people, and more than 114,000 work in the wind industry.<sup>21</sup>

### A IMPACT ON HOME EXPENSES

In addition to reducing carbon emissions, renewable energies are becoming cost-effective options for many homeowners. Solar and wind energies are comparatively more stable, and less prone to large-scale failure and the fluctuations that can impact fossil fuel markets. And when costs are calculated across a long term, renewable energies are increasingly more affordable because, after accounting for upfront installation expenses, the energy sources are, essentially, free. With investment and planning, solar energy can be one of the least expensive fuel sources per kilowatt-hour<sup>22</sup> — the California bill requiring that all new single- and multi-family homes (up to three stories) have photovoltaic systems installed is a prominent

example of potential cost efficiencies; homeowners are projected to save \$19,000 in energy expenses across a 30-year span.<sup>23</sup>

As technologies reach market maturity, and investments are made at the state and national levels, renewable energy prices will drop. Between 2010 and 2017, the average price of solar dropped 70 percent, and some experts predict a 50 percent reduction in the coming years. Similarly, between 2009 and 2016, the price of wind-generated energy dropped 66 percent, a trend that is expected to continue as economies of scale are more fully realized.<sup>24</sup>

## B HEALTH PERSPECTIVES

Fossil fuel pollutants increase the frequency of respiratory illness and attacks, and cardiovascular and neurological conditions, among others — the EPA found that in 2014, electricity production alone emitted more than 1 million tons of nitrogen oxides and sulfur dioxides, and more than 170,000 tons of particulate matter.<sup>25</sup> A recent study done by the Yale Program on Climate Change Communication found that nearly three-quarters of Americans recognize that exposure to fossil fuel byproducts is harmful to human health (even as most are unable to cite the specific health problems).<sup>26</sup>

By contrast, renewable energy resources lower air pollution and greenhouse gas emissions, and therein, can significantly reduce health costs in the United States; in the past decade, the adoption of wind, solar, and geothermal energies has reduced pollutant emissions and generated health benefits through reductions in premature deaths, incidences of respiratory and cardiovascular illness, and missed work and school days.<sup>27</sup> The U.S. Department of Energy and the National Renewable Energy Laboratory (NREL) estimate that solar energy usage alone can yield \$167 billion in health-related savings.<sup>28</sup>





# SECTION 3

## THE ENVIRONMENTAL JUSTICE & JUST TRANSITION MOVEMENTS

**Too often, any effort to tackle the climate crisis is framed as an either-or narrative: jobs or the environment. The proponents and antagonists in these stories are neither actual workers nor residents of the communities where these struggles are playing out; in fact, they are usually developers who seduce union leadership and elected officials with promises of jobs, or mainstream environmentalists who myopically pursue environmental policies often without regard to the impact of how those policies might threaten jobs. Both camps have a history of rarely seeking the perspectives and listening to the thoughts of the people who will actually do the work or “live” the policies, usually people of color, Indigenous people, or low-income whites.**

**So, how do we get to a place where good-paying jobs, healthy communities, and a sustainable planet can coexist, and policy can support all at the same time? The answer is Just Transition.**

### A HISTORY

Labor leader Tony Mazzocchi is reported to have said, “There is a Superfund for dirt. There ought to be one for workers.” He believed that a Superfund for workers should offer financial support and opportunity for free-of-charge education to any worker whose job is phased out because of changed environmental policies.<sup>29</sup> In 1995, Les Leopold (a Mazzocchi protégé and his eventual biographer) would articulate the underpinnings of the Just Transition philosophy. “The basis for Just Transition is the simple principle of equity,” Leopold said, “We ask that any worker who loses his or her job during a sunseting transition suffer no net loss of income. No toxic-related worker should be asked to

pay a disproportionate tax — in the form of losing his or her job — to achieve the goals of sunseting. Instead these costs should be fairly distributed across society.”<sup>30</sup>

In 1996, Leopold and Oil Chemical and Atomic Workers Union president Bob Wages started meeting with members of the environmental justice movement who were organizing with communities of color and Indigenous people to fight the siting of toxic facilities. Leaders such as Richard Moore, Tom Goldtooth, Connie Tucker, and Jose Bravo brought an environmental justice perspective to the conversation. As these dialogues continued, the environmental justice movement pushed the

labor movement to see beyond its workers and consider the health and safety concerns of the communities that surround facilities and plants.

Together they theorized that if the labor movement and the environmental justice movement combined the voices of workers and communities, they could exert greater pressure on public entities.

Just Transition Alliance (JTA) came to be in 1997, to unite rank-and-file workers with grassroots community residents as they create and promote a just transition from unsafe workplaces and environments to healthy communities with sustainable economies. (It represents the first effort to formalize a labor and environment partnership, predating the Blue Green Alliance by almost a decade.)

## B JTA IN ACTION

According to the Just Transition Alliance (JTA), Just Transition is a principle, a process, and a practice.

The Just Transition premise is that a healthy economy and a clean environment can and should coexist, and the process for achieving this vision should be a fair: Frontline workers and frontline community residents must not pay the costs of change with their health, environment, jobs, or economic assets, and any losses should be compensated. And workers and residents, as the ones most affected by pollution, should be in the leadership positions that craft policy solutions.

When it launched in 1997, JTA created a curriculum and training process with the following learning objectives:

- ▶ Foster greater awareness among community residents about plant operations (ex. management structure and protocols).
- ▶ Foster greater awareness among rank-and-file workers about how facility/plant operations affect the community.
- ▶ Build a strong worker and community coalition to hold the government, and toxic facilities/plants, accountable for attributable violations.

The training relies on a methodology known as the Small Group Activity Method (SGAM),

which was first practiced in the United States by the Oil Chemical and Atomic Workers Union and the Labor/Public Health Institute<sup>31</sup>; it uses role play, peer-to-peer learning, and other techniques to delve into topics such as fear of job loss, facility operations, and environmental pollution. JTA modified the SGAM to include equal numbers of workers and community residents — trainers (representatives from both the labor and the environmental justice movements) work with participants to understand the root causes of challenges, uncover the impact on both constituents, and develop strategy to create positive change for the collective.

Notably, JTA also introduced the concept of environmental systemic racism for consideration within the Small Groups, and there is guidance that urges the participants to focus on both localized interventions as well as macro-level and policy solutions — a simple power analysis reveals that both worker health and safety concerns, and community health and environmental concerns, are regulated by public entities at the federal or state level who are accountable to elected leaders...

And elected leaders answer to voters.

In expanding the concept of a just transition, JTA has gained wider acceptance in the labor movement both here and abroad, and provided a framework for other social justice movements.



# SECTION 4

## JOB DIVERSITY IN THE RENEWABLE ENERGY SECTOR: CURRENT TRENDS AND BARRIERS TO ENTRY

**The renewable energy sector has been hard hit by the COVID-19 pandemic. In many cases its jobs were not deemed essential; for example, 72,000 solar workers have lost their employment. Current job numbers reflect an 114,000 gap from 2019 employment projections, and economic uncertainty remains. Progressive solutions are required now more than ever.**

### A SOLAR

The solar industry is one of the fastest-growing sectors in the renewable energy field. Since 2008, the net capacity of solar photovoltaic cells has increased by more than 200 percent in the electric utility sector alone, and in just 10 years, solar-produced electricity capacity rose more than 30 percent.<sup>33</sup>

From 2014-2019, the solar workforce grew five times faster than U.S. job growth as a whole. Employment in the solar industry is nearly double that of the coal industry (only the oil and natural gas industries have more employees); the bulk of solar-related work is installation and project development, followed by manufacturing.<sup>34</sup>

Despite this positive growth, reports from surveys of the solar industry indicate that finding qualified employees is difficult. In

2019, more than 57 percent of firms found it “somewhat difficult” to find qualified applicants, and nearly half of all solar employers found it difficult to find enough workers who had the requisite experience, training, and skill level.<sup>35</sup>

With more widespread training, this deficit can be reversed. It also serves as an opportunity to establish and further workplace diversity — though the solar industry is still primarily white, and its employment rates for people of color and women are below U.S. workforce percentages overall, in the past decade, the number of women, Latinos, and Black people have, by and large, grown.<sup>36</sup>

## B WIND

In 2019, the wind energy sector employed 114,774 workers, representing the third-largest share of the power generation sector<sup>37</sup>. The industry is more racially diverse than the national workforce; its Latino employment rate is 20 percent, which slightly surpasses the group's proportion of the U.S. population.<sup>38</sup>

However, similar to solar, the wind energy sector hires fewer women than the national average (31 percent), and the employment rate for Black people is 8 percent, four points below the national average<sup>39</sup> and more than five points below their percentage of the U.S. population.<sup>40</sup>

## C LOW RATES OF STEM EDUCATION

Science, Technology, Engineering, and Mathematics (STEM) education is an essential qualification for working in the renewable energy sector: To be successful, individuals must possess a high degree of scientific competence and understand advanced technology.<sup>41</sup> But inequities in education hamper efforts to achieve diversity in this workforce, as students of color and those from low-income school districts do not have the same opportunities as their white peers.<sup>42</sup> Additionally, STEM courses often are taught in a "take it or leave it" manner, and this one-size-fits-all approach has an exclusionary effect, especially with respect to women and students of color.<sup>43</sup> A lack of student mentors and professionals who are positioned to develop or revise STEM curricula also compounds educational inequalities<sup>44</sup>

The vast majority of STEM professionals are non-Hispanic whites.<sup>45</sup> Renewable energy jobs are primarily filled by older, male workers;

less than 10 percent of the workforce is Black, and less than 20 percent are women.<sup>46</sup>

To improve diversity in the renewable energy sector, people of color must have more exposure to, and engagement with, STEM learning and related opportunities (ex. internships, clubs and member organizations, summer programming, etc.) Historically Black Colleges and Universities (HBCUs) are an ideal partner to establish and develop talent pipelines, and they can potentially provide remedial and/or supplementary education for renewable energy employees who may require such support — while these schools make up just 3 percent of U.S. colleges and universities, 27 percent of Black students with bachelor's degrees in STEM fields graduated from HBCUs.<sup>47</sup> A report from the National Science Foundation revealed that HBCUs represent 21 of the top 50 institutions whose Black graduates go on to receive doctorates in science and engineering.<sup>48</sup>



**D**

## DEMOGRAPHIC COMPOSITIONS AND OTHER CONCERNS

Renewable energy jobs are among the fastest-growing employment categories in the United States, and with intentional, pointed action, these industries have the potential to employ a large, diverse workforce. A 2019 diversity study by The Solar Foundation and The Solar Energy Industries Association found that its workforce is 73 percent white, 17 percent Latino, 9 percent Asian and 8 percent Black; its senior executive levels reflect the least diversity, being 88 percent white and 80 percent male.<sup>49</sup> Roughly half of respondents (white, Black, and Latino) reported feeling confident about career advancement potential and opportunities.<sup>50</sup> NREL reports that people

of color, collectively, make up approximately 31 percent of the wind energy workforce, and only 1 in 4 of all employees are women.<sup>51</sup> Many renewable energy industries currently do not track metrics on employee diversity.

Acknowledged factors that prevent people of color from entering the construction field are racism and discrimination within the industry.<sup>52</sup> Large solar companies, including Momentum Solar and Vivint Solar, have been sued for alleged verbal abuse and harassment.<sup>53,54</sup> The EEOC and various civil rights attorneys sued Bay Area-based Fidelity Home Energy, Inc. for discriminating based on names.<sup>55</sup>





# SECTION 5

## INTERVIEW INSIGHTS FROM ENVIRONMENTAL NONPROFITS

**The factors that lead to underrepresentation of people of color and women are complex and deserve study. In order to further understand causes and remedies related to the renewable energy diversity gap, WE ACT interns interviewed leaders of four Green Jobs nonprofits who have established successful job training programs that work to make opportunities available to everyone:**

- ▶ **DR. BEVERLY WRIGHT**, Executive Director, Deep South Center for Environmental Justice
- ▶ **DONELE WILKINS**, President/CEO and Founder, Green Door Initiative
- ▶ **ERIKA SYMMONDS**, Vice President of Workforce Development and Service Learning, GRID Alternatives
- ▶ **CHARLES CALLAWAY**, Senior Community Organizer, WE ACT for Environmental Justice

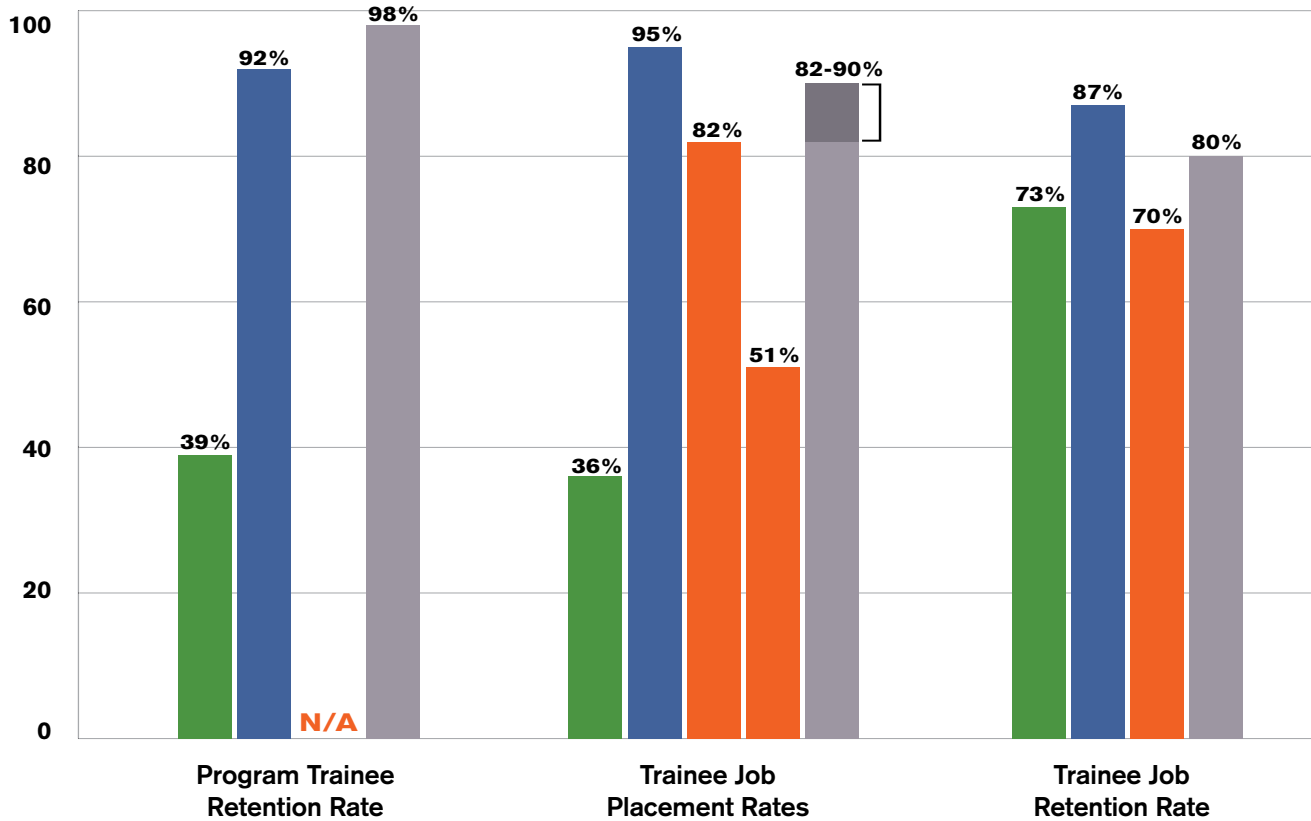
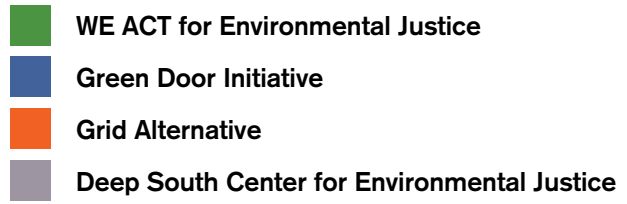
**Interviewees were asked about issues unique and specific to the communities that they serve, and operating challenges, including the impact of COVID-19 (more detailed descriptions of each program can be found on pages 28-31).**

### A PROGRAM APPROACHES & CONSIDERATIONS

Creating a strong community within the training cohort and connecting participants with people and resources beyond their organization are the foundation of all four programs. Callaway finds that matching current students with alumni who have gone on to be successful in the renewable energy industry is a powerful motivator because “trainees know they can make a living wage, and it can be a stepping stone to other opportunities.”

Wilkins does this by placing the Green Door Initiative program within a larger mission, framing trainees’ participation as part of the environmental justice movement and inspiring them to make lives better for those experiencing environmental racism. “It is crucial that [workers] understand the backstory, and that [we] make a connection between job training and helping the planet, so workers know WHY they are doing the training. [We] need to create environmental heroes that will become stewards of the Earth,” he says.

# RETENTION AND JOB PLACEMENT RATES



Dr. Wright states that their majority-Black trainees are a “microcosm of Black America” and “bring with them all the problems, constraints and difficulties” of systemic racism in the United States. As such, all of the programs strive to connect participants to organizations and entities that can provide wraparound services to help address issues such as poor public transportation, underlying health conditions, lack of childcare, and the need for affordable, quality legal representation, among others. (During the COVID-19 pandemic, these problems have been exacerbated, and many partner organizations and agencies have pulled back programming or had to shut down.) In Chicago, many individuals cannot access clean energy work due to low scores on

certification exams, and Julie Brazeau, technical assistance coordinator at the Midwest Renewable Energy Association, says that these testing struggles can be tied to disadvantaged socio-economic backgrounds.<sup>56</sup>

The educational attainment of program participants is similar across each organization. The Green Door Initiative and Deep South Center for Environmental Justice require high school-level reading and math in their selection process, and prefer candidates who have a high school diploma. While GRID Alternatives does not require high school diplomas, or math and reading competencies, to participate in hands-on training, it suggests that trainees work towards these attainments because they are a starting point for most solar jobs.

WE ACT trainees do not have a high school diploma, and they have faced hiring challenges. As renewable energy industries (specifically the solar installation field) becomes increasingly specialized, companies are looking for workers with a wider expanse of skills and abilities, and as renewable energy construction becomes more competitive, some companies require specific certifications.

As such, programs may have to look at integrating resume writing, interview training, networking, and similar modules to their course offerings, and this can be difficult with sparse funding. To circumnavigate some of these challenges and raise its 30 percent job placement rate, Callaway is working to create a solar installation co-op that can give WE ACT trainees an advantage by providing a direct line of employment to the industry while also forming and deepening connections in the renewable energy construction field.

Program design also must account for the fact that some trainees have had interactions with the criminal justice system. Based on the job placement rates of their organizations,

the interviewed leaders are confident that criminal backgrounds do not have to be a significant barrier, but intercession and advocacy is necessary to diffuse negative perceptions of felons and overcome any such discrimination. Adewale OgunBadejo, a GRID Alternatives workforce development manager in greater Los Angeles, asserts that “We have to get [business owners] to see the humanity in people and help them understand that these are just individuals who made mistakes. They’ve paid their debt, and now they’re ready to get out here and do something.”<sup>57</sup>

At Green Door Initiative, instructors work to break down false dichotomies that have historically hindered Black workers from gaining employment, for example, the notion that Black communities are more likely to abuse drugs than White communities. “Construction companies are hiring [white] people with opioid addictions, but creating barriers for [Black] people with a history of marijuana possession or usage,” Wilkins says, citing this among many “external systems put in place to reinforce reasons for employers not to hire” Black individuals.



# B

## PROGRAM CHALLENGES

All of the interviewees' organizations are functioning with inadequate levels of staff and funding. Throughout the interviews, it was clear that staff members fill a myriad of roles: the direct tasks of working with students on job readiness and supplying essential technical skills (ex. pre-hazmat training) but also using soft skills to serve as advisors, mentors, etc. Wilkins affirms this amalgam of roles, saying that Green Door Initiative staffers address "counseling, recruitment, conflict resolution, facing racism in the workplace, and navigating life as a single parent."

And now, all of these organizations must contend with the impact of COVID-19 and adapt their mostly experiential, hands-on training programs to function online during the pandemic. Green Door Initiative has conducted all of its training virtually, and Deep South Center and WE ACT have switched to a hybrid model where most training occurs online and only essential training occurs in person. Some GRID Alternatives programs have transitioned to online instruction, while others have adopted COVID-19 safety precautions in order to continue in-person training. Symmonds says GRID Alternatives has created a task force to make policy recommendations that address COVID-19's impact on its work, including training delivery.

There are positive aspects to shifting to online formats; notably, they allow for program components to be augmented and strengthened, and anyone with the internet and a device can access the information. In the past, due to its deep value for hands-on training, and the inequities and realities of the digital divide, GRID Alternatives had leaned away from web-based learning, but Symmonds points out that now it may be advantageous so trainees can gain computer skills that may help them be more marketable to renewable energy companies. But shifting to web-based platforms could still inadvertently exclude those who do not have the means of access, and there also are considerations around disparities in individual learning styles — Callaway observes that not everyone is a good online learner, and thus, there is a risk that engagement could be compromised, participants could lose sight of deliverables and scopes of work, and the experience itself may be arduous or overwhelming.

Wilkins found this to be a reality when his organization switched to virtual work, given that the number of staff stayed the same while "training has had to increase four-fold." Furthermore, many of these nonprofit leaders have found it difficult to assess the state and efficacy of knowledge transfer via online programming.

Besides these logistics, program costs for all of the interviewees have shifted due to the pandemic. Dr. Wright notes that while transportation costs have significantly declined, the organization has had to allocate monies toward computers, Zoom accounts, internet access antennas, and hiring people to handle new caseloads. Callaway points out that although net spending may not have been impacted, the cost of online learning has probably, largely, fallen to the trainees because they need to have the necessary devices and services in order to participate.

Lack of funding is an ongoing and unchanged challenge for these programs. All four interviewees say that with more capital, they would expand training, increase staff and enhance the training experience. To function at a level that fully meets the needs of its community, Callaway says his WE ACT would need an additional \$500,000. Wilkins says that his organization needs to have four trainings per year, however, with the current number of staff, it can only manage one training. In 2019, GRID Alternatives SolarCorps program functioned with \$5 million in funding, though its ideal budget is \$5.5 million annually.

Most of these organizations depend on federal funding, which is not always reliable for the long term. To continue developing their training programs, our interviewees emphasized that organizations need a plurality of funding sources to sustain and grow. Symmonds suggests that ideally, budgets would be a mix of government funding, and foundation, corporate and individual donations, rationalizing that such plurality can help keep organizations afloat should any one source drastically shift. Wilkins emphasizes the necessity of developing an endowment to ensure that organizations can serve their communities into the future.

## 2019 OPERATING COSTS

Deep South Center for Environmental Justice ▶ **\$1,400,000**

Green Door Initiative ▶ **\$170,000**

GRID Alternatives SolarCorps Fellowship ▶ **\$5,000,000**

WE ACT for Environmental Justice ▶ **\$100,000**

## FUNDING SOURCES

ORGANIZATION	FEDERAL	STATE	NONPROFIT
DEEP SOUTH CENTER FOR ENVIRONMENTAL JUSTICE	National Institute of Environmental Health Science	N/A	Kellogg Foundation, Greater New Orleans Foundation
GREEN DOOR INITIATIVE	National Institute of Environmental Health Science	Michigan Department of Corrections	Southeast Michigan Community Foundation
GRID ALTERNATIVES SOLARCORPS FELLOWSHIP	Corporation for National and Community Service	Solar programs (indirect funding)	JPB Foundation
WE ACT FOR ENVIRONMENTAL JUSTICE	N/A	Department of Labor, New York Department of Environmental Conservation	West Harlem Development Corporation, Bay & Paul Foundations



# SECTION 6

## SOLUTIONS & RECOMMENDATIONS

**A**

### JUST TRANSITION EFFICACY SCREEN AS U.S. LEGISLATION

There are a series of proposals in both the House and Senate of the U.S. Congress that attempt to advance some elements of a Just Transition concept. In an effort to establish a baseline set of vital elements, we suggest that the following screen be applied to proposed legislation:

The Environmental Justice Leadership Forum believes a Just Transition is critical to combating climate change while providing good-paying jobs. We believe that any legislative action should include the following elements:

- ▶ A fund to support workers through the transition from one sector to another
- ▶ Protection of pension funds
- ▶ Provision of health insurance (timing to be negotiated via the political process), to include full health benefits and inclusive of any medical coverage of diagnoses related to prior work environment
- ▶ An advisory board comprised of community members and workers to discuss and evaluate the transition
- ▶ Policies that address the environmental damage caused by the industry or facility in transition
- ▶ A process for repurposing the abandoned industry and/or facility
- ▶ A mechanism for continued funding of the transition

Below you will find an integration of this screen with currently introduced legislation.

The passage of the following bills could be instrumental in achieving true just transitions for workers, many of whom have given their lives to power our society through their employment in the fossil fuel sector: Now these individuals must be given opportunities to create a new pathway that ensures their own well-being, and the well-being of their families.

BILL	SOCIETAL IMPACTS						
	Workers' Support Fund	Pension Protection	Health Insurance	Civic Table	Addresses Environmental Damage	Repurposes Stranded Assets	Continued Funding for the Community
<b>114th Congress: S.2398 - Clean Energy Worker Just Transition Act</b> Introduced by: Senator Bernie Sanders (I-VT)	X	X	X		X		X
<b>Congress H.R.5986 - Environmental Justice For All Act/ S.4401 - Environmental Justice For All Act</b> Introduced by: Rep. Raul Grijalva (D-AZ-03) Senator Kamala Harris (D-CA)	X	X	X	X	X		X
<b>Miners Pension Protection Act</b> Introduced by Rep. McKinley, David B. [R-WV-1]		X					



# B

## WORKER TRAINING BEST PRACTICES

The training and civic engagement programs of Deep South Center for Environmental Justice, Green Door Initiative, GRID Alternatives, and WE ACT for Environmental Justice are a source of positive-impact workforce development that can help carry forth Just Transition ideals and advocacies. Policy makers should not look to reinvent the wheel when it comes to implementing a Just Transition; rather, they should ensure that programs have the financial and informational resources necessary to support their communities. Specifically, policy makers should look to create incentives that develop endowments for such organizations to ensure that they can function at a high-level for the long term.

One critical area of attention is remedying high unemployment rates in low-income communities and communities of color. Donele Wilkins highlights that when the Green Door Initiative Black community was

experiencing double-digit unemployment for those 22-35 years old, “we restored hope in the people by providing them a chance to help the planet”. At Deep South Center, Dr. Beverly Wright explains that people are motivated to participate in its training program because it provides a “pathway into the workforce, and to a stable economic system for their children” — in a National Institute of Health report, the Deep South Center program was found to save the government significant amounts of money by reducing recidivism<sup>58</sup>.

Erika Symmonds and Charles Callaway (of GRID Alternatives and WE ACT, respectively) both mention that their programs keep pace with an increasingly competitive solar industry, making sure that the underserved aren’t disadvantaged or locked out of its opportunities. Their approaches also are a cost-efficient way to improve civil society and reduce recidivism in vulnerable communities.



These organizations all have years of experience designing Green Jobs training programs, and identifying and establishing recruitment and retention strategies. In order to accomplish one of the primary Just Transition goals — closing the diversity gap within the Green Jobs and renewable energy sectors — advocacy groups and other similarly-situated businesses and nonprofits must consider funding these programs at a higher rate and implementing their best practices:

### **1. PAY FOR OSHA TRAINING CARDS**

Thirty-hour OSHA training cards are a requirement for most construction jobs, and the training typically costs more than \$350.00. These costs should not be allowed to dissuade or deter the participation of individuals with low incomes because they cannot afford the fees.

### **2. PROVIDE AND SUBSIDIZE TRANSPORTATION**

Low-income communities often have limited access to public transportation, and/or the systems are outmoded or have been neglected from lack of investment and maintenance. Without public transportation, travel costs can be expensive. Helping participants get to and from training by providing or subsidizing costs removes another potential barrier to participation.

### **3. CREATE MENTORING RELATIONSHIPS**

Interviewees stated that one of the most effective ways to motivate individuals in the program was to connect them to others with similar backgrounds who work in the Green Jobs sector. Some participants may have never experienced a mentor-like relationship in school, work, or in other settings, and the training can be difficult — knowing that someone was successful after doing what you're doing can help retain students and motivate them when they face various challenges. Also, keep track of program graduates and consider recruiting them as assistants who can address specific needs and answer questions through the lens of experience; one organization documents trainees' experiences for two years post-graduation.

### **4. OFFER TUTORING AND OTHER SUPPORT**

Half of the interviewed organizations have staff dedicated to tutoring trainees; the most common subjects are math, basic life skills training, financial literacy, and computer training. At organizations that do not have dedicated staff to provide such support, trainees still receive personal attention and help connecting to other organizations and entities who can address their needs.

### **5. CONNECT WITH COMPANIES IN THE INDUSTRY**

The construction sector is becoming increasingly competitive, and many companies do not recruit or form relationships with communities of color (and don't have the internal history or infrastructure to pursue such endeavors). Hiring an individual to liaise and collaborate with different companies, and advocate on behalf of the program as a whole as well as on behalf of individual trainees, will imaginably raise the odds of successful job placements, provide pathways to other partnerships and initiatives, and keep organizations in the know about valuable and emerging opportunities. Half of the interviewed organizations have staff dedicated to job placement.



# CONCLUSION

Low-income communities and communities of color have disproportionately suffered from the negative health and economic impacts of our reliance on the fossil fuel economy and the aftereffects of environmental pollution. And the costs of that energy have been literally and figuratively too high.

The transition to a renewable energy model has the potential to address pressing issues of economic and environmental injustice in marginalized communities. To ensure that future environmental policy will reflect a Just Transition position, we must learn and adopt best practices from organizations that are leaders in bringing about environmental justice in their communities.

Deep South Center for Environmental Justice, the Green Door Initiative, GRID Alternatives, and WE ACT for Environmental Justice are doing this by working to close the diversity gap in the renewable energy jobs sector. By providing comprehensive Green Jobs training in communities that lack direct connections to renewable energy industries, these organizations are exposing

capable young people to careers while also providing the renewable energy industry with the skilled workforce it needs to expand and continue growing.

In order for a Just Transition framework to take hold, state and national governments must support the organizations who are already implementing such initiatives with adequate funding and comprehensive, multifaceted legislation. Inclusivity is the bedrock of Just Transition, and at this period when there is exigent and timely (yet unquestionably overdue) recognition of our society's vast economic, social, and environmental inequities, everyone has a role in achieving positive, effectual outcomes. And critically, those who live in the most impacted communities and most experience the weight of these inequalities must have a seat at the decision-making table.

Through Green Jobs training and a Just Transition approach, policy makers and grassroots organizations can do the work that will protect our environment, slow climate change, and create a sustainable future now and for years to come.

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# Green Door Initiative



The Green Door Initiative (GDI) is a green jobs training and civic engagement program based in Detroit, Michigan. GDI's mission is to address problems of environmental inequity in their community by training individuals to enter the green economy, increasing environmental literacy and promoting sustainable lifestyles. They have 25 participants per session, and today they have trained nearly 400 people. Program demographics are 97 percent male and 3 percent female. Participants are mostly Black, with around 1-10 percent Latinx individuals.

## PROGRAMS

### ► CLIMATE CHANGE AND ENVIRONMENTAL RESTORATION

GDI works to reverse the adverse impacts of climate change, toxic industrial legacies and poor past land use by developing a strong volunteer base, impacting public policy and training a workforce dedicated to restoring water, air, land, wildlife and other ecological assets.

### ► CLIMATE ORGANIZERS LEADING DETROIT (COLD)

An essential element of COLD is for young leaders to actually influence and participate in the development and implementation of policy solutions to climate change locally and abroad. GDI works to develop leadership in young people to ensure a healthy transition for the next generation of environmental stewardship.

### ► WORKFORCE DEVELOPMENT

GDI operates a comprehensive jobs training program designed to prepare residents for the green economy.

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# GRID Alternatives



**GRID Alternatives is a national nonprofit leader in making clean, affordable solar power and solar jobs accessible to low-income communities and communities of color. GRID directly serves communities in California, Colorado, and the Mid-Atlantic region, as well as Tribal communities nationwide. GRID's International Program serves communities in Mexico, Nepal, and Nicaragua.**

## **PROGRAMS** ▶ **WORKFORCE DEVELOPMENT**

GRID's workforce development programs provide industry experience and networking opportunities that prepare participants for careers in renewable energy. GRID partners with hundreds of job training organizations and community colleges nationally to provide training that complements their curriculum, and also offers multiple levels of training for individuals, including paid fellowships through its SolarCorps Fellowship Program. The racial composition of the 2019-2020 SolarCorps Fellowship Cohort was 20% Black/African-American, 39% Latinx or Hispanic, 7% Asian, 9% American Indian/Alaskan Native, 18% White, 7% Multiracial.



[GRIDAlternatives.org](http://GRIDAlternatives.org)

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# Deep South Center for Environmental Justice



The Deep South Center for Environmental Justice (DSCEJ) is an organization dedicated to improving the lives of children and families harmed by pollution through training for the green energy construction sector as well as research, and civic engagement. DSCEJ's vision is to lay the groundwork for children and families in the Gulf Coast Region to thrive in a healthy and just environment.

## DEVELOPING A WORKFORCE FOR ENVIRONMENTAL CAREERS

DSCEJ's worker training program offers around 4 training sessions per year, with no less than 25 students each, who are trained in a variety of skills to prepare them for the green jobs construction sector. Classes offer rigorous health and safety training, as well as personal development and life skills. Students earn certifications in lead abatement, asbestos removal, mold remediation, and hazardous waste operations. Program participant demographics are mostly Black individuals, with 1-10 percent Latinx individuals. Most participants are male with around 3 percent being female.

### ► THE ENVIRONMENTAL CAREER WORKER

Training Program focuses on delivering comprehensive training to increase the number of disadvantaged and underrepresented minority workers in areas such as environmental remediation/restoration, construction, hazardous materials/waste handling and emergency response.



[DSCEJ.org](https://www.dscej.org)

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# WE ACT for Environmental Justice



Founded in 1988, WE ACT for Environmental Justice (WE ACT) is an organization with a history of working at the grassroots and government levels to address environmental inequity in the West Harlem community and beyond.

WE ACT's mission is to increase grassroots advocacy, as well as fight for the protection and representation of marginalized communities in environmental policy.

▲ **WILLIE RUSSELL, GRADUATE & MEMBER**

Willie took all three of WE ACT's classes, earning his 30-hour OSHA, Building Performance Institute, & Solar Installation certificates. He has been working in construction and is active in developing our solar co-operative, so he and his fellow solar trainees can create more opportunities for work - for themselves as well as other Solar Installation graduates.

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## THE WORKER TRAINING AND JOB READINESS PROGRAM

In 2012, WE ACT launched its worker training and job readiness program, which trains individuals to enter the construction sector of Green jobs.

WE ACT's job readiness program includes a wide range of trainings including the 30 hour OSHA safety training, solar photovoltaic installation, BPI training as well as flagging & scaffolding.

The program has trained over 2,000 unemployed or underemployed Northern Manhattan residents, providing essential jobs for an economically and environmentally healthy community. The participant demographics are 97 percent male, 3 percent female, with mostly Black participants and up to 10 percent Latinx individuals.



WEAct.org

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## CREDITS

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