

# How to Meet the Moment in the Green Economic Transition:

Breaking Down Barriers for Marginalized Communities and Growing the Green-Skilled Workforce



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Authored by Bella Goñi

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## Executive Summary

The climate crisis is upon us – severe weather events continue to intensify and wreak havoc on our planet and communities year after year. These impacts are disproportionately felt by marginalized communities, those that have historically and systematically been denied access to services and resources across economic, political and cultural arenas. At the same time, the emerging green economy is in the midst of a massive growth spurt. For example, in 2022 in the U.S., clean energy jobs grew to make up over 40% of total energy jobs. With the passage of the Inflation Reduction Act in 2022, the largest piece of climate legislation in the United States to date, this growth is anticipated to significantly accelerate. However, the same marginalized communities, typically low-income and communities of color, that experience the worst impacts of climate change are also currently being left out of the work and wealth opportunities that the green economy holds. In order to begin disrupting cycles of poverty and addressing environmental harms, this transitional moment must be used to uplift and intentionally include these communities, creating workforce pipelines that lead to stable, well-paying green jobs and the opportunity to build wealth long-term.

Green jobs hold the potential to provide economic mobility to the untapped talent left behind by the current economy, including people without four-year college degrees or those who have been formerly incarcerated. Yet, potential alone is no guarantee. Employers, workforce boards, and other organizations must be intentional to realize the potential of this once-in-a-generation opportunity. From joining regional cross-sector collaborations to conducting outreach to underrepresented job seekers and spotlighting on-the-job training programs, strategic coordination across employers, government, and equity-centered organizations is essential to ensure this pivotal moment can benefit everyone.

## Background

Climate change describes the trend of long-term shifts in temperatures and weather patterns felt on a global scale. Human activities are now said to have 'unequivocally' been the cause of this crisis, primarily driven by the fossil fuel industry and its emission of greenhouse gasses that trap heat in the atmosphere. Communities of color are disproportionately impacted by the health-related consequences of a changing climate. From heat waves to wildfires and floods to tropical storms, climate change is intensifying rapidly, becoming more destructive and costly every year.

Meanwhile, the green economy is growing rapidly, with Oxford economists now estimating that green industries as a whole could be worth \$10.3 trillion by 2050. With this growth also comes an explosion of new green jobs emerging every year, especially since the passage of the Inflation Reduction Act in the U.S. An analysis from the BlueGreen Alliance and Political Economy Research Institute estimates that over the next decade, the Inflation Reduction Act will create more than 9 million good, green jobs.

## Political Moment: Inflation Reduction Act & Justice40 Initiative

The continued intensification of impacts from climate change has led to increased legislative and regulatory efforts at the Federal level to enact initiatives and laws to combat on-the-ground impacts of the crisis. Namely, the past few years have seen the emergence of both the Justice40 Initiative and the passage of the Inflation Reduction Act – a powerhouse duo that, if implemented effectively and with equity at the forefront, has the potential to drive significant progress towards reaching climate and economic justice goals.

Created by President Biden's Executive Order 14008 in 2021, the Justice40 Initiative is a whole-of-government approach with the goal of delivering 40% of the benefits of Federal climate investments to disadvantaged communities.





*The Justice40 Initiative represents an opportunity to address past harms and generate transformative change in overburdened and underserved communities. Justice40 covered programs are those that fall into one of 7 categories of investment: climate change, clean energy and energy efficiency, clean transit, affordable and sustainable housing, training and workforce development, remediation and reduction of legacy pollution and the development of critical clean water and wastewater infrastructure.*

2022 marked a historic year for the Biden Administration with the passage of the Inflation Reduction Act (IRA), the largest climate bill in the United States to date. The IRA contains a *minimum* of \$369 billion in investments to spur climate and clean energy projects across the country, including over \$40 billion specifically for disadvantaged communities as identified by the [Climate and Economic Justice Screening Tool](#). Together, these two initiatives create the conditions for unprecedented economic growth and acceleration towards climate mitigation and adaptation, and it is up to advocates fighting for equitable implementation to ensure that the Administration's goals come to fruition to drive positive lasting change in disadvantaged communities across the country. The job projections from the IRA in combination with both the bill's strong labor standards and the administration's Justice40 goals mean that this piece of legislation has the potential to transform the country's workforce while also uplifting economic and racial justice.

## Racial Wealth Gap

Large wealth gaps across racial and ethnic groups have endured for decades, if not longer, according to [Pew Research Center](#). In 2021, the typical white household had 9.2 times as much wealth as the typical Black household, 5.1 times more wealth than Hispanic households, and 3 times more than multiracial households. The so-called racial wealth gap is the product of four centuries of institutional and systemic racism, whose accumulated impacts have caused significant disparities in income, health, education and opportunity that exist to this day. In the words of [RAND Corporation](#), 'Yesterday's segregation is today's wealth gap. We like to pretend that we live in a race neutral, merit-based society now, that this is all in the past, but you can't erase history. It shows up in our wealth. For many, it shows up in the lack of wealth.' In addition to legislative solutions like reparations and higher taxes on the wealthiest Americans, access to education, opportunity and the ability to build wealth are key factors to disrupting these cycles and beginning to close the wealth gap. The green economic transition, if leveraged properly, represents a key moment that could put us on a path to disrupt current trends.

## Green Workforce

A green job, or ‘green collar’ job, refers to a family-supporting, career-track job that directly contributes to preserving or enhancing environmental quality. According to [Brookings](#), many green jobs offer more competitive pay—exceeding national mean wages by up to 19 percent, in some cases and offering more equitable wages in other cases. In clean energy, for example, workers at lower ends of the income spectrum typically earn \$5 to \$10 more per hour than other jobs of the same level. Green jobs also promote transferable skills and pose lower formal educational barriers to entry. About 50% of workers in the clean energy and energy efficiency sectors solely possess a high school diploma, yet they are able to earn higher wages than peers in other industries with the same level of education.

However, as [Brookings points out](#), “despite the lower educational barriers to entry, the clean energy workforce is older, dominated by male workers, and lacks racial diversity when compared to all occupations in the U.S.” If we continue on this trajectory, the green jobs with the highest wages will exclude the communities that can benefit from it most – namely, low-income and communities of color, along with communities disproportionately impacted by the criminal legal system. Not only are these communities under-represented in a range of green occupations relative to the labor market as a whole, Black and Latine workers also tend to be concentrated in lower-wage occupations in the sector. They make up 44% of the nation’s laborers and material movers, for example, whose average salary is about \$35,000 per year, but only 23% of electricians, who earn an average of \$63,000 per year. Black workers make up 9% of the energy workforce compared to 12% of the entire U.S. workforce. There are no subsets of the clean energy workforce (solar, energy efficiency, transportation, etc.) in which Black workers are represented proportionally. Formerly incarcerated individuals make up 1% or less of all subsets of the clean energy workforce. These disparities are even more stark at an executive level – the Solar Energy Industries Association’s (SEIA) [2019 Solar Industry Diversity Study](#) found that among all senior executives reported by solar firms, 88% are White and only 2% are Black. The green economic transition contains significant potential for wealth building for those employed within it, so inclusivity is imperative.

Clean energy employers consistently report hiring difficulties as a growing problem, citing lack of experience, training and certifications, or technical skills. At the same time, the Diversity Study also found that over 60% of solar companies do not track diversity statistics, offer mentorship opportunities, or have any kind of strategy to increase hiring from underrepresented communities. Despite nearly 80% of business leaders agreeing that skills acquisition will be the most pivotal driver of a green transition, only 55% state that they are planning to implement any sort of training programs to bridge the skills gap and bring more job seekers into the green workforce. The projected job growth in all green industries means that companies must intentionally widen their reach and efforts to upskill future employees. It is urgent that employers and other stakeholders seize the opportunity to broaden their outreach to underrepresented communities and connect them to more training offerings.

## **Challenges to Entering the Green Workforce for Job Seekers Facing Barriers**

Low income communities and communities of color face a multitude of barriers to entering the green workforce. At Dream.Org we believe that the people closest to the problems are also closest to the solutions. We sent out a survey to our supporters asking about challenges that underrepresented communities face in pursuing careers in clean energy, and ideas around effective ways to both reach these communities and increase their access to the green economy. Survey responses identified common challenges, including: lack of representation and mentors in the field, limited access to education and training programs, financial constraints including high education costs, and cultural and societal barriers stemming from structural racism.





## Lack of Green Jobs Exposure

One of the most significant barriers identified in disadvantaged communities is a lack of exposure to the types of green jobs and careers that exist as a whole. At its core, this issue stems from educational and resource disparities, especially the fact that income inequality and residential segregation have essentially led to a state of educational segregation across the country. People in disadvantaged and underserved communities are often not made aware of the existence of these types of green jobs, whether in their educational system or social networks, and also do not see representation such as teachers or leaders in these careers that allow them to envision a path forward for themselves. According to Brookings, this is reflective of both a general lack of visibility into green jobs along with a lack of intentional outreach to underserved jobseekers and students on behalf of private sector companies in these industries. That being said, there is a clear need for more visible career pipelines and job opportunities to ensure that high-quality jobs in the green economy are made available to all prospective workers.

## Inaccessibility of Green Jobs

Secondarily, these communities face disproportionate barriers in accessing and being able to afford training, apprenticeship and certification programs for green industries. These types of educational opportunities are not widely available across the country, especially in communities that have long been underserved. Furthermore, these programs often come with a hefty price tag, making them increasingly inaccessible. This inaccessibility was reiterated in a workshop entitled 'Breaking the Green Ceiling' hosted by the Environmental Professionals of Color, which aimed to uncover the major barriers to entry for people of color into environmental careers at various levels. Given the major hiring difficulties that clean energy employers report, addressing these training and cost barriers would be a benefit to employers and job seekers alike.





## The Green Economy and Mass Incarceration

In order to holistically tackle the poverty cycle and persisting racial wealth gap affecting this country's marginalized communities of color, we should look to the consequences of mass incarceration in the U.S. today.

The U.S. is the largest prison state in the world, incarcerating 1.8 million people at the end of 2023. Despite only making up around 5% of the global population, the U.S. houses more than 20% of the world's prison population. Incarceration rates have increased greatly since the 1970s – an increase of 500%, and even further growth was seen in the 1990s. Mandatory minimum sentencing, “three strikes” laws and truth in sentencing laws mandate a specific amount of jail time for a crime, with no leeway or discretion involved for the crime committed. The result is more people in prison for longer periods of time. Incarceration rates are unevenly distributed across racial and ethnic lines – African Americans, who represent only 13% of the U.S. population, now constitute 37% of sentenced prisoners. Formerly incarcerated individuals face unique challenges that require expansive solutions. Challenges include: a lack of education and programming around green skills and jobs within prisons themselves, lack of or interrupted educational attainment and work experience, inability to find work with sustainable wages, and lack of support when transitioning back to society while dealing with stigma and legal barriers.

The promise of the green economy for formerly incarcerated job seekers lies in its potential to help create pathways into career jobs for individuals who lack degrees and work experience. Jobs created by green investments often require lower formal educational credentials, and often provide an entry to industries – such as construction, manufacturing, and transportation – that have well-established career pathways and opportunities for upward advancement, while also providing better wages and benefits than other sectors of the labor market.





## CASE STUDY: INDEED'S TOOLS FOR EQUITABLE JOB SEARCH AND HIRING

As part of its Environmental, Social & Governance (ESG) commitments, Indeed is helping *all* people get jobs while reducing their environmental footprint, making job search faster and simpler, removing bias and barriers to employment, and building sustainable equity for their own workforce.

In order to meet its commitment to helping 30 million people facing barriers get hired by 2030, Indeed has built partnerships with organizations like Dream.org that directly support job seekers facing barriers in order to deeply understand their experiences and in turn to develop solutions that improve employment outcomes.

Two areas of focus for Indeed have been:

1. **Skills-Based Hiring** for the roughly two-thirds of Americans who don't have a four-year degree but who are skilled through alternative routes (or "STARs"); and
2. **Fair Chance Hiring** for the one in three U.S. adults who have a criminal record.

The barriers faced in both areas are not only highly intersectional with each other and other racial and ethnic inequities, they lead to employment exclusion based on ineffective criteria rather than a person's ability to do a given job.

As shown throughout this paper, cross-sector collaboration by government, employers, workforce development organizations, training providers, and other community-based groups can meaningfully address these barriers together. For example, people of color, who are also disproportionately impacted by the criminal legal system, lack access to higher paying jobs and to the affordable pathways they need to gain entry to those jobs. With increased outreach and accessible upskilling opportunities for jobs that can have a lower degree-requirements but more equitable wages, green jobs can be a win for these communities and the employers that need to fill these jobs.

## Recommendations

The challenges identified elucidate a number of gaps that need to be addressed by different kinds of stakeholders, primarily revolving around bridging the green skills gap by intentionally bringing in jobseekers from underrepresented communities. 63% of business leaders believe that the responsibility of driving the green transition lies with them, rather than policymakers, but closing skills gaps will require coordination of stakeholders from all levels of government to educational and finance institutions to nonprofit organizations, and to private sector employers themselves. The following sections propose solutions, informed by voices from Dream.Org's community survey.

## Education and Outreach Strategies

As a whole, increased education around green jobs and careers in low-income and communities of color is needed, so that current and future job seekers are able to plan for a career path in these industries. Dream's survey respondents emphasized this need, suggesting the need for programs that provide ongoing education in STEM and clean energy beginning at an early age and targeting underrepresented areas and low-income school districts. Private sector employers and nonprofit organizations can also help to fill this educational and exposure gap by creating locally grounded outreach strategies in order to adequately reach community members and communicate around green careers as a whole. Respondents suggested that companies partner with local organizations to develop community-based outreach plans and mentorship opportunities that embrace diversity. Community-based organizations, neighborhood centers, religious centers and affordable housing groups are all partners that can help to recruit diverse candidates and disseminate information around job and training opportunities. These strategies can help to ensure that clean energy employers are following through on economic inclusion goals.

## **SPOTLIGHT: DREAM ENTREPRENEURS NETWORK**

Outreach from minority-owned green businesses in particular is an important avenue for exposure as well. Dream.Org's Dream Entrepreneurs Network is a group of Black and Brown CEOs of companies in green industries spanning clean energy, clean technology, energy efficiency, electric vehicles and more. The Network is committed to hiring individuals from disadvantaged communities to help build out climate projects and create long term work and wealth opportunities for the communities they come from. Dream.Org works to uplift this Network so that communities of color can see representation and leaders in the industry and as a result, better envision a green career path for themselves.

# Training and Workforce Pipelines

One of the big, if not the biggest, challenges identified by both job seekers and employers having hiring difficulties is the need for increased training opportunities to create a skilled workforce ready to enter into green jobs. Local governments, private sector companies, nonprofit and philanthropic organizations all have roles to play here, and given the vast size of the workforce deficit, effort from all of these stakeholders will be required.

Experiential or on-the-job learning opportunities such as apprenticeship and pre-apprenticeship programs are a key mechanism for effective training. Given the importance of hands-on experience along with the fact that many jobs in the clean energy sector do not require a college degree, on-the-job learning opportunities are imperative. However, not enough of these opportunities are currently available to meet the growing need. According to Brookings, strategies to ensure early and inclusive outreach include: strong referral and recruitment systems for training programs, especially working with local entities (such as advocacy and community-based organizations) for dissemination and connections, creating pre-apprenticeship ‘feeder’ programs, and providing more wraparound support services such as mentorship programs which can improve apprenticeship completion rates. Private sector employers should work to intentionally recruit underrepresented communities by prioritizing supportive spaces and job readiness tactics within their training methods. Establishing apprenticeship programs and direct workforce pipelines with companies in green sectors is essential to diversifying the industry as a whole. With increased investment and support from all sectors, these training and apprenticeship opportunities can grow in communities across the country to meet the accelerating need.

Furthermore, local governments, nonprofits and private sector companies can work together to develop targeted workforce and talent pipelines that connect disadvantaged job seekers to good, green jobs, often stemming from government-funded climate infrastructure projects. The goal is to create an ecosystem that collaborates and coordinates efforts to effectively bring underserved communities into the green economy - with government and philanthropy providing funding for training programs, green businesses committing to targeted apprenticeships and hiring, and nonprofits working to fill capacity gaps from all angles, but especially for communities that need to be connected to key stakeholders in the space.





## CASE STUDY: TAZO TEA'S URBAN FORESTRY WORKFORCE PROGRAM

TAZO Tea provides a successful model for how a large scale company can have a direct impact on bringing disadvantaged community members into the green workforce and increasing local climate resilience through strategic partnerships. TAZO began this project by partnering with and committing to support two climate justice advocacy organizations – We Act for Environmental Justice and Intersectional Environmentalist – to expand the brand's environmental justice commitments and internal knowledge. Then, TAZO teamed up with American Forests to launch the TAZO Tree Corps, a paid, locally hired workforce that will use tree planting and maintenance to help combat climate change while also creating new green jobs in economically disadvantaged neighborhoods and communities of color. The program plans to work over the course of a couple years in 5 major cities – Minneapolis, MN, Detroit, MI, San Francisco Bay Area, CA, Richmond, VA and The Bronx, NY – that have been historically afflicted by discriminatory zoning practices that have left low-income and communities of color without access to green spaces. Under this model, local workforce partners helped to recruit applicants from underrepresented communities – fellows received two weeks of paid training, after which they transitioned to full time employment. TAZO also provided grassroots organizations with funding to help address barriers to retention, like housing, transportation and childcare, to ensure a smooth transition for fellows into the green workforce.

## Project Labor and Community Workforce Agreements

Federal bills such as the Inflation Reduction Act are expected to create millions of jobs, with much funding trickling down to state and local governments, who will then hire private sector companies to build out climate infrastructure projects. These entities must work together to establish project labor/community workforce agreements with every new project that arises, particularly those that are directed to disadvantaged communities in accordance with the Justice40 initiative. State and local governments along with private companies should commit to targeted local hiring practices in the buildout of federally-funded projects, thinking about both equitable procurement practices along with building training and workforce pipelines directly from impacted communities.

The Department of Labor's Good Jobs Initiative can be used as a blueprint for these agreements – particularly their resources on [how project labor agreements can be used as tools for equity](#). [Project Labor Agreements](#) (PLAs) are collective bargaining agreements typically between unions and employers that establish the terms and conditions for employment for a specific project – they can include factors such as goals for hiring local community members and economically disadvantaged workers, implementing recruitment policies for workers from underserved communities, creating equity plans, requiring participation of diverse business enterprises, and more. [Community Workforce Agreements](#) (CWAs) are a type of PLA that is more oriented towards community commitments around equitable workforce development, social justice, small and diverse business support and more. Communities often use this type of agreement to ensure that projects are built out using a skilled workforce that encompasses workers from all backgrounds.



## **CASE STUDY: BYD APPRENTICESHIP READING TRAINING**

[Jobs to Move America](#) partnered with both a [community-labor coalition along with BYD](#), an electric bus manufacturer, to develop high quality training and workforce pipelines to train a new generation of workers in the manufacturing industry for skilled union jobs at their facility. The three groups worked together on a [community benefits agreement](#) to create a career ladder for existing workers, especially those facing barriers to employment, to skill up and acquire good green jobs. Specifically, BYD worked to create the country's first electric bus-focused pre-apprenticeship and apprenticeship program which encompassed both in classroom instruction and on the job training. Further, BYD committed to a goal of recruiting and hiring at least 40% of its workers from populations facing barriers to employment, including folks of color, justice-impacted individuals, women and veterans. This is a great example of a company working directly with community groups and a nonprofit organization to facilitate a successful workforce pipeline that prioritizes underserved communities.

## Financial Support and Targeted Investments

Responses to Dream's survey also indicated the need for accessible financial aid through scholarships and grants to facilitate the pursuit of certifications and advanced degrees. Respondents recommended publicizing these opportunities in targeted schools, such as Historically Black Colleges and Universities (HBCUs), public libraries, local nonprofits and religious centers.

In accordance with the ideals of the Justice40 Initiative, targeted investments into disadvantaged communities must be prioritized from all levels of government along with alternative financial institutions such as green banks. However, climate projects in these communities must have an economic development lens in order to be successful long term, and this economic development angle must focus on job creation and wealth building opportunities. For more information on different types of financing for climate projects along with key stakeholders and partnership models, see Dream.Org's [Climate Finance Guide](#).



### CASE STUDY: DREAM.ORG AND GOOGLE PARTNERSHIP

Dream.Org worked with Google.Org and Google Nest to create a scholarship program focused on providing flexible funding for disadvantaged community members to be able to acquire the training and education needed to enter the green workforce. The program awarded 50 scholarships of \$3,500 each in flexible funding, which was used by awardees for a variety of purposes such as sustainability management courses, LEED certification programs, educational courses around climate finance, energy efficiency in affordable housing, community gardening methods and many others. 46% of scholarship recipients had also been impacted by the criminal justice system. Flexible funding was a key aspect of these scholarships, and allowed recipients to take courses that would lead to higher paying management positions in the green economy as well. These types of training and educational courses have a lifelong impact – giving folks an entry point into the green economy at a point in time where career opportunities are growing exponentially.



## Key Takeaways

The green economic transition represents a pivotal moment to advance economic equity and meet employers' hiring needs, but the current green jobs workforce has left out significant portions of the population. The following takeaways are grouped by audiences we hope to serve through this whitepaper.

**For jobseekers**, it is key to understand the immense potential that lies within the emerging green economy, along with the massive amounts of funding coming from the Federal government which will lead to an explosion of green jobs. Searching for green jobs and opportunities to upskill will allow you to get involved early on in the green sectors like clean energy and break into new career pathways. Check out our website [here](#) to learn more about opportunities from Dream.Org for flexible funding and scholarships that can support you in your green career journey.

**For government agencies, workforce development organizations, and similar entities**, widely uplifting green job and training opportunities especially through intentional outreach to low income and communities of color is essential. You have a once-in-a-generation opportunity to provide training and skilling programs and make these jobs accessible to communities and individuals who have been largely left out of the green economic transition thus far.

**For businesses and employers**, you may already see the challenges in hiring workers skilled for new types of jobs. The current green skills gap is significant and needs to be addressed intentionally and intersectionally with cross-sector stakeholders. By strategically building workforce pathways, employers have the opportunity to broaden their talent pool, bring underserved communities into their workforce, and as a result directly help the effort to advance economic equity across the country.

For all stakeholders, none of us can do this alone. Successful and intentional collaboration and communication have the potential to alter the makeup of the emerging workforce in order to meet growing hiring challenges and tackle the green skills disparity, economic inequity, and environmental injustice at the same time.