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A NEXT GENERATION
WHITE PAPER



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EXECUTIVE SUMMARY

AS THE GREEN ENERGY INDUSTRY CONTINUES TO EXPAND, IT PRESENTS SIGNIFICANT ECONOMIC OPPORTUNITIES AND THE POTENTIAL FOR SUSTAINABLE GROWTH. HOWEVER, RESEARCH INDICATES THAT BIPOC (BLACK, INDIGENOUS, AND PEOPLE OF COLOR) AND WOMEN REMAIN UNDERREPRESENTED IN THE SECTOR, FACING MULTIPLE BARRIERS TO ENTRY AND ADVANCEMENT. THIS WHITE PAPER EXPLORES THE CHALLENGES FACED BY BIPOC AND WOMEN IN THE GREEN ENERGY INDUSTRY, EMPHASIZES THE IMPORTANCE OF DIVERSITY AND INCLUSION, AND PROPOSES THE IMPLEMENTATION OF A COMPREHENSIVE MENTORING PROGRAM TO ADDRESS THESE DISPARITIES. BY HARNESSING THE POWER OF MENTORING, WE CAN CREATE A MORE INCLUSIVE AND EQUITABLE WORKFORCE, UNLOCKING THE POTENTIAL OF UNTAPPED TALENT IN THE GREEN ENERGY INDUSTRY.

UNLOCKING THE POTENTIAL OF MENTORING: A PATHWAY FOR BIPOC AND WOMEN IN THE GREEN ENERGY INDUSTRY

We face something approaching a crisis in the green energy economy. There are too few workers to meet the ambitious targets clean energy nations, states, cities and companies have set to significantly reduce their carbon footprint by 2030. Recently the Biden administration invested an unprecedented \$864 billion in federal funding to improve the country's transportation, water, energy, and broadband systems to reduce carbon emissions. As the Brookings report points out "This comes on top of hundreds of billions of dollars for related climate and industrial investments in the Inflation Reduction Act and CHIPS and Science Act.



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Research consistently emphasizes the benefits of mentoring in supporting career development, skill acquisition, and fostering social capital. However, despite extensive research on mentoring, its potential has not been fully realized in promoting diversity and inclusion in the green energy sector. This White Paper explores the challenges faced by BIPOC and women in entering the industry, highlights the limitations of existing mentoring programs, and proposes the development of a mentoring APP to address these gaps.

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Undeniably, green or clean energy is a fast growing field which is paying above average wages in all sectors. According to a [E2 Report](#), “Clean energy and clean transportation now employs more than 40 percent of all energy workers in America. Two years after the COVID-19 economic downturn wiped out more than 600,000 clean energy jobs, nearly 75 percent of those jobs were regained. According to [Green Citizen](#), today the renewable energy industry is growing 12% faster than all the US economy and yet research indicates that BIPOC and women are massively underrepresented in the clean energy world and face numerous barriers in entering and advancing within the green energy industry.

According to a report by a [coalition of energy organizations](#), Blacks make up roughly 8% of clean energy employees with Latino employees making up almost 17% of clean energy workers who are mostly concentrated in entry-level construction positions. Furthermore, a study published in the Journal of Environmental Management found that women hold only 27% of leadership positions in the renewable energy industry in the fastest-growing source of jobs in the U.S.. These statistics underscore the need for targeted efforts to address systemic inequalities, promote diversity, and create inclusive pathways for BIPOC and women to enter and advance in green energy careers. See the chart below for more detailed statistics from the [E2 Alliance](#).

The pressure on companies to diversify their workforce is now enormous. The reality is that companies are having a hard enough time recruiting and training its current infrastructure workers. Indeed the challenge is much worse than simply recruiting new workers as “Brookings research shows, nearly 17 million infrastructure workers are projected to permanently leave their jobs over the next decade due to a wave of retirements, job transfers, and other labor market shifts.” These are all skilled workers and we need to do a better job of making sure that we have enough for the new green economy that we are trying so hard to desperately bring into reality.

Kane offers a few examples concerning the goal to reach the ambitious carbon reduction goals that we have set for ourselves--“without enough skilled electricians..installing electric vehicle charging stations, upgrading buildings, and deploying clean technologies will be extremely hard and reduce the reach of new federal climate efforts. To meet these labor needs will mean appealing to young BIPOC populations who are often for numerous reasons “sidelined from these careers so that the majority of the infrastructure workforce now aging, male, and white; with less than a third are people of color. To get ahead of this labor shortage will take imaginative policies that confront head on the obstacles the research literature has identified.

Some of the key obstacles consist of:

- Many prospective BIPOC and women job seekers lacking awareness that green energy jobs exist, but they also lack as Brookings report points out the flexible and accessible pathways to fill them, including struggles to gain needed on-the-job training and limited supportive services (e.g., child care, transportation).
- A shortage of work-based learning opportunities such as registered apprenticeships or pre-apprenticeship training but currently reach less than 1% of Workforce Innovation and Opportunity Act (WIOA) adult and dislocated worker trainees.
- Workplaces that continue to project a white male majority viewpoint that signal to BIPOC and women that they are less than welcome there and can expect a higher dose of sexual harassment and racism as a result. _

- Misinformed beliefs about green energy jobs BIPOC individuals and women often believe that green energy jobs are only accessible to individuals with extensive technical expertise or engineering backgrounds, which can deter them from pursuing such careers. Their limited access to job counseling and networks frequently discourage BIPOC individuals and women from actively seeking out and participating in the transformative potential of green energy
- Absence of Social Networks Limited access to networks and mentors, unconscious bias, lack of representation, and perceptions concerning limited opportunities for skill development all serve as significant barriers to entry for BIPOC and women in green energy careers. These obstacles are further compounded by the missing component of social capital and networks, particularly for BIPOC and women. The lack of social capital directly hinders their access to essential social networks that can provide valuable connections, internships, and job opportunities. Research conducted by the National Renewable Energy Laboratory reveals that individuals from underrepresented groups often face difficulties in building professional relationships and accessing informal channels of information crucial for career advancement. This lack of social capital perpetuates a cycle of limited opportunities for BIPOC and women, impeding their ability to thrive and contribute to the green energy sector. Efforts must be directed towards creating inclusive networks, mentorship programs, and initiatives that bridge the social capital gap and enable equal access and opportunities for marginalized communities in the renewable energy industry.
- Dearth of Internships and Other Workforce Exposure Opportunities. There is a consensus of belief that Internships play a crucial role in career development by providing practical skills, industry exposure, and networking opportunities. However, studies have shown that these opportunities are often limited for marginalized communities. A report published by the National Association of Colleges and Employers (NACE) found that BIPOC students face disparities in internship access, with lower participation rates compared to their white counterparts. The study attributed this discrepancy to various factors, including limited awareness of internship programs, lack of connections, and fewer opportunities provided by companies.

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Companies are in war to find all those talented individuals who will add value to their companies but a question arises, how do you repair a leaking talent pipeline? We need to address the pipeline from two directions--enable more minority folk and women to discover that one exists in the first place by increasing awareness about green energy jobs and opportunities...

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Moreover, research conducted by the American Association of University Women (AAUW) highlights the gender disparities in internship experiences. Women often encounter biases and stereotypes that impact their chances of securing internships in male-dominated fields, including the green energy sector. This disparity not only limits their exposure to real-world experiences but also hinders their career progression in the industry.

Next Generation's Proposed Solution:

The complexity of reasons why there is a significant underrepresentation of BIPOC and women in the clean energy field is not subject to an easy solution. Solving the problem will require a significant undertaking by all the leading stakeholders--clean energy companies that wish to commit to creating a more diversified workforce, black, hispanic and women social justice organizations, schools colleges and universities and not least workforce development organizations. Above all it will take leadership to set goals and to keep monitoring efforts to accomplish them. **Next Generation Inc.** intends to play a catalytic role---helping to bring organizations together to come up with local and regional solutions capable of being scaled. In moving towards that solution we believe that we can bring the various stakeholders together around five major action vectors:

1. Collaborating with corporations and educational organizations, significantly increase the number of green energy internships and pre-apprenticeships that can be targeted to BIPOC and women populations.
2. Developing green energy career exposure summer workshops for aspiring college students.
3. Organizing green career fairs both virtual and physical that focus on BIPOC and women at places.
4. Recruiting and training BIPOC and women mentors to guide and assist aspiring green job seekers in their choice of careers.
5. Creating a Mentoring app that will allow mentors and mentees to communicate using their smartphones.

Out of the five vectors we believe the mentoring app could be the game changer--in terms of addressing two barriers to green career entry as identified above. Using the app could both build job awareness--we hope for example to include short green energy courses. Occupedia and some other helpful guidance locally designed to close some of the information gaps.

In general, we can define mentoring as an intervention whose main goal is to develop a personal connection that aids in improving academic outcomes (McDaniel & Yarbrough, 2016). There are two kinds of mentorships--Community Based Mentoring (CBM) and School Based Mentoring (SBM).

Community mentoring is found inside the community at large and school based mentors are recruited internally. Despite the popular image of mentors meeting each other in a coffee shop or in a library--the research suggests that virtual interactions can be just as powerful as face to face ones. A 2022 study confirms that the fact that” both in-person and synchronously online-trained mentors achieved similar perceived gains in mentorship skills, overall quality of mentoring, and the ability to meet mentees’ expectations, as well as intent to make changes in their mentoring practices.”¹

This finding builds upon other positive news confirmed by a recent meta-analyses of youth mentoring programs that “mentoring is associated with improved outcomes in the behavioral, psychological, educational, social, emotional, and cognitive functioning domains for adolescents and teenagers” (Dubois et al., 2011; Raposa et al., 2019). What is also evident from the research is that mentorships are most effective when people are matched with those from similar social and ethnic backgrounds. These cultural matches enable at the outset more trust building and deeper emotional connections than if mentors are randomly matched with mentees. A byproduct of such matching is an increase in motivation is directly linked with student feeling engaged in the classroom. Motivation helps students in increasing their academic achievement and their academic achievement is linked with the engagement. Increased motivation leads to increased academic achievement and increased academic achievement leads to increased engagement in class (Guthrie, Klaua, & Ho, 2013).

Next Generation sees an important opportunity to apply this new research to assist BIPOC and women as they enter jobs in the green energy space without the support they need to find the right placements, training and more importantly to begin a network that can lead them through the maze of possibilities. We must keep in mind, following that latest research that any effective mentoring program has to be well structured and contain the following elements

1. A set of clear objectives
2. A training program for both the mentor and mentee.
3. A structured set of interactions which for at least the first interaction should be partly scripted
4. A reflection on each interaction by both mentor and mentee that forms part of the evaluation

Limitations of Existing Mentoring Initiatives: Despite the promising benefits of mentoring, existing initiatives have struggled to achieve widespread impact in enhancing diversity and inclusion in the green energy sector. Several key limitations contribute to this challenge. First, traditional mentoring programs often lack the necessary focus on the unique experiences and needs of BIPOC and women. Second, the scarcity of mentors from underrepresented backgrounds hinders the development of relatable role models for aspiring individuals. Third, the lack of structured support and accountability mechanisms may undermine the effectiveness of mentoring relationships. To overcome these limitations, innovative approaches are needed.

Conclusion:

Why is all this lack of representation of BIPOC and women important? As Penrod points out “with people of color and women now representing the majority of young students in the U.S., clean energy companies could face labor shortages in the future if they fail to recruit more diverse workers” According to a 2019 solar industry report, just 2 percent of all senior executives are Black and only one in five is a woman. As Paula Glover, president of the Alliance to Save Energy, states “a more diverse workforce “is what the future looks like,” she said. “So as a sector, if you are planning to be there in another 10, 15, 20 years, and you’re not planning to make your workforce more diverse, I am not sure what you do, because the students coming in are more diverse.” Glovers’ words are backed up by some hard facts, such as the finding that a diverse workforce and management team has been shown to increase revenue stemming from innovation. In recent studies, a 10 percent increase in diversity was associated with a 0.8 percent increase in earnings, and companies with an above-average diversity in leadership were found to be 70 percent more likely to capture new markets.

Mentoring has the potential to play a transformative role in promoting diversity and inclusion in the green energy industry. However, existing mentoring initiatives have struggled to effectively address the specific needs of BIPOC and women. By developing a mentoring app tailored to the unique challenges and experiences of underrepresented groups, the industry can unlock the full potential of mentoring in supporting their career development. Embracing innovative approaches to mentoring will not only enhance diversity and inclusion but also accelerate the transition to a sustainable future.

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LAURENCE PETERS, JD, PHD
VICE PRESIDENT
NEXT GENERATION, INC.