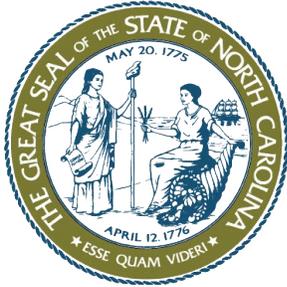


CLIMATE CHANGE WORKFORCE DIVERSITY REPORT

*Recommendations to Grow a Diverse and Talented Workforce
to Address the Impacts of Climate Change*

DECEMBER 2022



NORTH CAROLINA
**DEPARTMENT of
COMMERCE**



BACKGROUND

On January 9, 2022, Governor Roy Cooper signed Executive Order 246 to advance an equitable and just clean energy economy in the state. The Order lays out the targets for reducing greenhouse gas emissions, sales of electric vehicles, engagement of the environmental justice community, and the development of various plans and tools designed to further reduce the impacts of climate change. Importantly, in Section 12, the Order calls for the creation of a workgroup to develop a report with strategies to diversify the occupations and industries that are critical to understanding and addressing climate change. While climate change will impact all North Carolinians, the negative impacts will be felt disproportionately by our communities of color, rural communities, and those living in low-income areas.

The climate and environmental justice movement has a deep legacy in North Carolina. Specifically, a 1982 Warren County protest about the state of North Carolina's decision to locate a toxic landfill in their small African American community served as the very beginning of the environmental justice movement in the nation. It sparked several studies designed to measure the connection between race and hazardous waste-siting decisions. Forty years later, climate justice is of paramount importance across the country, with the creation of the Office of Environmental Justice and External Civil Rights in the U.S. Environmental Protection Agency to oversee a large investment in environmental justice initiatives created by the Inflation Reduction Act (IRA).

“Preparing today’s workforce, and educating and training North Carolina’s future generation of workers, is one of the most important jobs we have to ensure a talent pipeline that is prepared for the limitless career opportunities and good jobs of tomorrow. At North Carolina Commerce, our mission is to improve the economic well-being and quality of life for all North Carolinians. That’s why prioritizing diversity, equity and inclusion in long-term workforce development planning is so vital to our state’s recovery, resiliency, and economic success.”

MACHELLE BAKER SANDERS
Secretary, NC Department of Commerce

Workgroup and Report

The Climate Council named Dr. Greg Monty of North Carolina Agricultural and Technical State University the chair of the workgroup during their June 2022 council meeting. The Department of Commerce, the NCWorks Commission, and the Governor's Office provided staff to support the workgroup chaired by Dr. Monty. Together they identified ten members to join the workgroup. These members are experts representing education, state government, business, tribal communities, and environment justice. The group met several times over the course of the summer and early fall. During their meetings, the workgroup discussed priorities for the state around workforce development in careers to address climate change, identified four focal areas, and came to consensus around 11 recommendations and 30 strategies.

As outlined in Section 12 of EO 246, the goal of this report is to provide a series of recommendations and strategies to support the diversification of current and future careers that will help to mitigate the effects of climate change. This includes but is not limited to careers related to clean energy, resilience, and sustainability. Importantly these careers, cross over multiple sectors and will require various levels of education – from short-term non-degree credentials to bachelor's degrees to graduate degrees. This report is designed to be used collaboratively by education and workforce leaders, employers, policymakers, community-based organizations, and other stakeholders.

Focal Populations

For the purposes of this report, we are particularly interested in focusing on individuals from underserved and unserved communities and identities that have been marginalized by our various structures and systems, including but not limited to people who identify as Asian and Pacific Islander, Black/African American, Hispanic/Latino/a/x, American Indian, individuals previously in foster care, individuals from families with low-income, individuals who are involved in the reentry process, individuals with disabilities, LGBTQIA+ individuals, and immigrants, refugees, and English language learners.

We also acknowledge that people have multiple intersecting identities and that our engagement with individuals and communities must embrace and support this intersectionality. Furthermore, we know that these individuals and communities have too often been systematically disenfranchised through our political, educational, and social services systems.

In the face of disenfranchisement, marginalization, prejudice, and racism, these communities continue to demonstrate their resilience, creativity, innovation, and support for one another. While the lack of representation in climate-related occupations may be similarly low across groups, it is essential that we understand each individual communities' lived experiences and then, in partnership with them, develop and implement culturally relevant and responsive solutions to the proposed recommendations and strategies. Throughout the remainder of this report, we will refer to the aforementioned groups as our **focal populations**.

WORKGROUP MEMBERS

Dr. Greg Monty, Chair

NC Agricultural & Technical State University

Nate Humphrey

NC Community College System

Rebecca LaClaire

Metrolina Native American Association

Candace Lowery

Department of Administration

Dr. MariaRosa Rangel

Wake County Public School System

Greg Richardson

Department of Administration

Beth Schrader

Department of Environmental Quality

Pat Sturdivant

Capital Area Workforce Development Board

Caroline Sullivan

NC Business Committee for Education

Ivan Urlaub

NC Sustainable Energy Association

Sherri White-Williamson

NC Conservation Network

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Our commitment to increasing education access and work-based learning opportunities for individuals from underserved communities is evidenced in the \$23.7 million award to North Carolina A&T State University from the US Department of Commerce to start the STEPs4GROWTH program, a clean energy training program that is intended for individuals from underserved communities. ”

DR. GREGORY MONTY

Professor, North Carolina A&T State University

RECOMMENDATIONS

In this section of the report, we present recommendations across four different focal areas: Career Awareness and Education, Employer Engagement, Policy Recommendations, and Data and Measurement.

These recommendations are intended for education and workforce leaders, employers, policymakers, and community-based organizations.

Recommendation #1

Increase knowledge of climate change, clean energy, and environmental justice issues for youth, families, and adults.

- **Strategy #1**
Develop an outreach framework to communicate to focal populations using culturally relevant and responsive practices.

Recommendation #2

Identify sustainable plans for career awareness and recruitment related to career pathways in climate change jobs for youth and adults from our focal populations.

- **Strategy #1**
Coordinate the efforts between local area workforce development boards, Department of Public Instruction, and the NC Community College System to develop coordinated career pathways across the educational systems that are based on industry needs, and when relevant, incorporate the Inter-state Renewable Energy Council (IREC) career pathways.
- **Strategy #2**
Coordinate and share information with our focal populations and their families on how to use tools such as the North Carolina Business Committee for Education (NCBCE) Work-based Learning Navigator and NCcareers.org to connect to climate change career pathways information. When possible, invest to streamline and connect workforce, career pathway, job opportunity, and educational tools.

Recommendation #3

Invest in strategies that support youth and adults to gain knowledge and experience with training and education programs that prepare them to work in industries and occupations related to climate change.

- **Strategy #1**
Develop work-based learning opportunities, including internships, registered pre-apprenticeships, and registered apprenticeships.
- **Strategy #2**
Encourage local area workforce development boards, community colleges, and local area high schools to connect adults and youth to training and job opportunities in careers related to addressing climate change.
- **Strategy #3**
Provide professional development for educators and counselors at all levels around clean energy and climate related occupations.

SPOTLIGHT ON...

THE SOLAR CLEAN ENERGY YOUTH APPRENTICESHIP

Starting in the summer of 2021, the State Energy Office, the NC Business Committee for Education, NC A&T, Halifax Community College, Halifax County Schools, and the Department of Public Instruction partnered to host the nation's first youth pre-apprenticeship in solar clean energy. High school students participated in an 8-week pre-apprenticeship program where they engaged in 80 hours of work-based learning with solar employers and participated in 96 hours of instruction time where they earned 5 credentials including OSHA-10 and Lean Six Sigma Yellow Belt.

The program was designed to intentionally engage students and their families and reduce barriers to participation for students who historically may have been unable to participate in similar programs. Students and their parents were invited to attend information sessions where program directors shared more about the opportunity and could answer any questions from families. Next, students were recruited to this program as part of a cohort where they participated in instructional time and work-based learning time together. This was particularly helpful in recruiting students from our focal populations so that they could participate with other students with similar identities and experiences. Importantly, students were paid for both their work-based learning and instructional time. The program also provided for wrap-around services like transportation and food to reduce the barriers for students to participate.

In the first year of the program, 20 students were served, the majority of whom identified as students of color and girls. In the summer of 2022, the program grew to 30 students and included students from four other school districts. With the recent \$23.7 million grant awarded from the US EDA's Good Jobs Challenge, NC Agricultural & Technical State University will grow North Carolina's clean energy workforce, including expansion of this program across other clean energy sectors and in three new regions (Charlotte, Greensboro, and Northeast NC Coastal regions).

Recommendation #1

Engage employers in career awareness and work-based learning activities for youth.

- **Strategy #1**
Ensure that employers are aware of state and local tools and events that help to support career awareness, including NCBCE's Work-based Learning Navigator, NCcareers.org, and local district supported career days.
- **Strategy #2**
Promote the development of relationships between students, their families, employers, school districts, and local workforce development boards to support paid work-based learning activities for focal youth including internships and pre-apprenticeships.
- **Strategy #3**
Support employers in developing community engagement programs that promote trust and cooperation especially with focal populations and their families.

Recommendation #2

Support employers recruiting a diverse workforce in industries and occupations related to addressing climate change.

- **Strategy #1**
Deepen relationships between employers, high schools, colleges, universities, and professional organizations, including 2-year and 4-year Minority Serving Institutions (MSIs), Historically Black Colleges and Universities (HBCUs), and other entities focused on members of our focal populations.
- **Strategy #2**
Encourage employers to review their policies and programs that help create an inclusive work environment, including diversity, equity, inclusion trainings for all employees; cohort hiring; employee affinity groups; mentorship programs; and ensuring equitable salary and benefits packages.

Recommendation #3

Share available funding sources with employers that will allow them to create and expand work-based learning programs.

- **Strategy #1**
Promote greater awareness of existing financial incentives and programs to support pre-apprenticeship, apprenticeships, and On-The-Job-Trainings (OJTs), including the Workforce Innovation and Opportunity Act (WIOA); Tuition and Registration Fee Waiver for high school pre-apprenticeship participants; and funding available through ApprenticeshipNC to support expansion of apprenticeships.
- **Strategy #2**
Leverage IRA and Infrastructure Investment and Jobs Act (IIJA) funds to help employers develop registered pre-apprenticeships and registered apprenticeships, along with other work-based learning opportunities like OJT.

WORKFORCE FUNDING

Workforce Innovation and Opportunity Act

See [WIOA fact sheet](#) for more information.

WIOA includes four titles that can serve our focal populations and provide them with funding to pursue training and education. These titles include:

- Title I, administered by the Division of Workforce Solutions, provides careers services for dislocated workers, youth, and adults from special populations.
- Title II, administered by the North Carolina Community College system, provides funding for adult education and literacy programs.
- Title III, administered by the Division of Workforce Solutions, provides career services to all North Carolinians.
- Title IV, administered by the Department of Health and Human services, provides funding for rehabilitation services programs.

Youth Apprenticeship Tuition Waiver

North Carolina G.S. 115D-5(b)(16) authorizes a [tuition waiver](#) for high school students who start in a registered pre-apprenticeship program while in high school that leads to a registered apprenticeship program post graduation.

Apprenticeship Expansion Funds

North Carolina Session Law 2021-180 approved \$12 million in funding to support small businesses (less than 500 employees) in Tier 1 and Tier 2 counties in hiring new apprentices who are ages 16–25 in high-demand fields. More information can be found through [ApprenticeshipNC](#).

IRA Apprenticeship Provisions

The [IRA](#) incentivizes employers to hire apprentices for work contracted through the creation of both bonus credits and penalties. The requirements to earn the bonus credits vary based on the type of credit. Penalties can be incurred by employers who do not meet the minimum standards for hiring apprentices as set forth in the law. Importantly, an employer cannot be penalized if they contacted their state apprenticeship agency (ApprenticeshipNC for the purposes of NC employers) and do not receive a response within five business days.

Recommendation #1

Identify policy levers to recruit and train a diverse workforce for jobs related to addressing climate change.

- **Strategy #1**
Provide recurring funding for outreach and awareness programs including, NCCareers.org and other programs detailed in the recommendations under Career Awareness and Education.
- **Strategy #2**
Provide funding for programs designed to support the educational and supportive services needs of students and trainees, including but not limited to SNAP Employment and Training, Short-term workforce credentials, and Longleaf Commitment grants.
- **Strategy #3**
Support postsecondary institutions to develop new programs, including through the creation of a competitive start-up fund for community colleges and universities to start programs related to clean energy (extension of funding from the General Assembly).
- **Strategy #4**
Support postsecondary institutions to recruit and retain high quality instructors, including leveraging public-private partnerships to identify instructors and support salary increases of faculty in these areas.

Recommendation #2

Use available federal funding, including funds from the IRA and IIJA to promote apprenticeship programs for individuals from our focal populations.

- **Strategy #1**
Provide technical assistance to employers through federal funding (e.g., IIJA and IRA), especially as it pertains to use of apprentices.
- **Strategy #2**
Develop practices that will incentivize contractors to prioritize workforce Diversity, Equity, Inclusion, and Accessibility (DEIA) in RFPs.
- **Strategy #3**
Support the development and implementation of DEIA training for state agencies, contractors, and subcontractors.

SPOTLIGHT ON...

LONGLEAF COMMITMENT GRANTS AND WORKFORCE RESILIENCE GRANTS

In 2020 using over \$78 million in funding from the Governor's Emergency Education Relief (GEER) fund, Governor Cooper created two grant programs to ensure affordable student access to postsecondary education. The Longleaf Commitment program provides a debt-free community college education at one of the state's 58 community colleges for the graduating high school class of 2021. In the 2021-2023 biennium budget, signed by Governor Cooper, the program was extended to the graduating high school class of 2022. Recognizing the need to provide grants to adults wanting to quickly reskill and upskill, also using the GEER funds, the Governor invested \$20 million to create the Workforce Resilience Grant program. These grants provide up to \$750 to individuals enrolled in short-term non-degree credentials in high-demand fields at any of the 58 community colleges. An additional \$3 million was provided for short-term credentials in the biennium budget. To date, these programs combined have served tens of thousands of students in the state.

Recommendation #3

Identify strategies to increase the engagement with and representation from our focal populations in climate-change conversations and policymaking.

- **Strategy #1**
Encourage state agencies to create plans to engage community stakeholders as they prepare to invest in climate change.
- **Strategy #2**
Develop a catalog of available programs that can be shared within communities that provide information on program availability, eligibility, and the application process.
- **Strategy #3**
Explore the feasibility of creating a state outreach team that stimulates collaboration across agencies to build sustained relationships and trust within communities.

Recommendation #1

Ensure that individuals from the focal populations are included as full partners in the refinement, development, and implementation of the recommendations and strategies.

- **Strategy #1**
Seek feedback from the focal populations on the strategies and recommendations included in this report.
- **Strategy #2**
Encourage the education, workforce, employer, and policy stakeholders to deepen their connection and engagement with the focal populations for sustained collaboration. Ideally, individuals from the focal populations would have decision-making power in the development and implementation of programs, policies, and practices resulting from this report.

Recommendation #2

Develop robust data systems and metrics to measure the efficacy of recommendations and strategies that are designed to increase diversity in the occupations and sectors related to addressing climate change.

- **Strategy #1**
Develop shared goals and metrics around the diversity in the occupations and sectors related to addressing climate change. These goals may be at the state level as well as more localized goals.
- **Strategy #2**
Identify baseline data on employment diversity in the occupations and fields related to addressing climate change and a plan for regular measurement.
- **Strategy #3**
Ensure accountability measures for all stakeholders invested in meeting the shared goals.
- **Strategy #4**
Seek regular engagement from participants, their families, and other stakeholders on their experiences.



SPOTLIGHT ON... THE NAVIGATOR

The North Carolina Business Committee for Education, a business-led nonprofit organization, hosts the **Work-based Learning Navigator**. This tool is designed to connect K12 teachers and educators with work-based learning activities for middle and high school students across the state. Employers are recruited to serve as resources for educators by creating a profile on the Navigator and agreeing to provide support to educators by providing work-based learning activities such as serving as guest speakers, providing worksite tours, internships, and youth apprenticeships. With over 800 employers and individuals on the Navigator, this tool serves as an invaluable resource to connect employers with educators, students, and families in their communities.



CONCLUSION AND FUTURE CONSIDERATIONS

This report is designed as a starting point for education and workforce leaders, employers, policymakers, and community-based organizations as they work to create and expand their role in diversifying the occupations and sectors essential to addressing the impact of climate change in North Carolina. We believe that through continued collaboration and investment in developing our workforce to address climate change, the state will be able to support EO 246 and the climate action goals of the state.

As the next steps to this report, we will seek additional feedback from our focal populations on the contents of the report to further refine the recommendations and strategies to be more reflective and responsive to the focal populations' needs as well as account for regional economic and workforce differences. We will engage with education and workforce partners across the state to determine a timeline and action plan to implement the recommendations and strategies outlined in this report.

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The Department of Environmental Quality and our State Energy Office are committed to ensuring a sustainable energy future in North Carolina. A just transition to a clean energy economy calls for inclusive workforce strategies to ensure that underrepresented communities can benefit from the creation and growth of climate-related careers. The recommendations in this report are another step to help ensure our environment and our economy benefit the health and prosperity of all North Carolinians.”

ELIZABETH S. BISER
Secretary, NC Department of
Environmental Quality