



Building a Just Climate Future for North Carolina

6 Ways State Leaders Can Create Safe and Healthy Communities and Ensure Access to Clean and Affordable Energy

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Introduction and summary

As North Carolina state leaders work to keep state residents safe amid the COVID-19 pandemic, leading North Carolina scientists have spotlighted how the effects of climate change—another long-term, deadly threat—are expected to worsen in the future. The message from these scientists to state leaders is stark: The already detrimental and deadly consequences of more extreme weather events, flooding, sea level rise, and other impacts fueled by climate change are highly likely to escalate as global temperatures continue to increase over the coming decades.¹

The findings were detailed in the first statewide assessment of current and future climate change impacts, released by the North Carolina Institute for Climate Studies in March. This new analysis, titled “The North Carolina Climate Science Report” (NCCSR), warns that climate change “will continue to pose a significant challenge for the foreseeable future for the 10.5 million people who call this state home.”² The report details how climate change will affect North Carolina’s public health, economy, and environment. (see the text box on the NCCSR’s findings below) In doing so, it aims to inform the bold, comprehensive, and holistic set of climate actions mandated by Gov. Roy Cooper (D-NC) in October 2018 through executive order (EO) 80, including the development and release of the NCCSR. EO 80 also called for the North Carolina Climate Risk Assessment and Resilience Plan—the state’s first climate resilience plan—launched in June 2020. Moreover, the EO called for the development of the innovative statewide Clean Energy Plan—which was launched in October 2019—and other strategies centered on achieving a 40 percent reduction in the state’s greenhouse gas emissions by 2025, addressing past inequities, and building stronger, healthier, and more resilient communities across the state.³

Glossary of terms

CAFO: Concentrated animal feeding operations

DEQ: North Carolina Department of Environmental Quality

EJ: Environmental justice

NCBCC: North Carolina Building Code Council

NCCSR: The North Carolina Climate Science Report

NCHFA: North Carolina Housing Finance Agency

NCICS: North Carolina Institute for Climate Studies

NCORR: North Carolina Office of Recovery and Resiliency

ZEV: Zero-Emission Vehicle

To protect public health, safety, and economic security, North Carolina state leaders must take immediate action to meet the racial justice goals set forth by Gov. Cooper, implement the state's Clean Energy Plan to reduce power sector emissions by 70 percent below 2005 levels by 2030, and improve access to affordable and reliable energy for all state residents as part of a plan to achieve carbon neutrality by 2050.⁴ State leaders must also move quickly to implement the Climate Risk Assessment and Resilience Plan to build safe, healthy, and resilient communities, including by building affordable housing and critical infrastructure in historically underserved areas that can withstand future extreme weather events fueled by climate change; permanently funding a state resilience office; providing technical assistance and funding for community-led resilience projects and to build community capacity for climate resilience planning; protecting and restoring wetlands and other natural areas, including along the coast and rivers to reduce flood risks; and substantially upgrading and improving living conditions in correctional facilities to reduce climate change and public health risks, including COVID-19 exposure and death. (see text box on COVID-19 and climate change risks for people held in prisons below)

In addition, state leaders must take the following six actions:

1. Create standards for building clean and resilient infrastructure and housing.
2. Prioritize equitable housing policies and just community development.
3. Accelerate cleanup of toxic sites and flood mitigation.
4. Provide equitable access to clean and affordable energy.
5. Support a just transition to clean energy.
6. Foster inclusive and equitable public engagement.

Facing stark projections of increased natural disasters, catastrophic flooding, deadly heat waves, and major storms, North Carolina, like other states, must confront systemic racism and environmental injustice and implement a comprehensive, equitable, and just climate action plan to provide access to pollution-free energy and protect the health and safety of all state residents well into the future. By taking the above policy actions, state leaders can tackle climate change while advancing economic, racial, and environmental justice (EJ) in communities across North Carolina.

The North Carolina Climate Science Report

The NCCSR is a peer-reviewed report written by a group of independent scientific experts based in North Carolina and overseen by a scientific advisory panel. The report was produced using the same rigorous methods and process used to develop the U.S. National Climate Assessment and complies with the federal Foundations for Evidence-Based Policymaking Act of 2018 to ensure the traceability and validity of data and information used in the report.⁵

The NCCSR concludes that “large changes in North Carolina’s climate, much larger than at any time in the state’s history, are very likely by the end of this century.”⁶ The devastating impacts of storms, flooding, temperature changes, and sea level rise on North Carolina’s shoreline, flood plain, and front-line communities are a new normal. Findings from the NCCSR project with high certainty that these issues will continue to worsen over the next decade. Highlights from the report include:

1. Extreme heat: 2019 was the hottest year in North Carolina’s history, and 2009 through 2018 was the hottest decade on record in the state. Temperatures will noticeably increase across all seasons, making North Carolina summers more dangerous—and even fatal for vulnerable residents.⁷ More extreme heat is likely to trigger more intense droughts, wildfires, and heat stress that will threaten public health, particularly in city centers. High temperatures disproportionately harm the state’s outdoor workers, who had the highest rates of heat-related deaths in the country in 2005.⁸ Low-income communities, who are likely less equipped with air conditioning and struggle to pay electricity bills, are especially at risk. In addition, 30 percent of North Carolina state prison facilities do not have air conditioning, making inmates and state correctional employees more vulnerable to the dangers of heat waves.⁹ Longer and more intense droughts are likely to reduce access to water for drinking and other uses.¹⁰

2. Storms and floods: The years 2015 through 2018 saw the largest recorded number of heavy rainstorms in North Carolina’s history. The NCCSR projects that the quantity and intensity of storms that hit the state will increase. The report finds it “virtually certain” that rising sea level and increasing intensity of coastal storms, especially hurricanes, will lead to increases in storm surge flooding in coastal areas. In addition, flooding on the Tar River in June 2020 set records for nonstorm flooding in that basin, particularly around the Rocky Mount community.¹¹ Increased flooding will put hundreds of thousands of homes, businesses, schools, and other infrastructure at risk of damage, threatening economic security, living conditions, critical services, and the daily lives of North Carolinians.

3. Sea level: Sea level is rising approximately two times as fast along the northeastern coast of North Carolina compared with the state’s southeastern coast. Communities in Dare, Hyde, and Carteret counties face the highest risks from sea level rise. The NCCSR concludes it is “virtually certain that sea level along the North Carolina coast will continue to rise” and projects a sea level rise of 1.7 feet to 3.9 feet in Duck, North Carolina, and 1.2 feet to 3.3 feet in Wilmington by 2100. High-tide flooding is projected to become a near-daily occurrence by 2100. Protecting coastal communities from rising sea levels could cost North Carolinians nearly \$35 billion.¹² In many cases, these high adaptation costs far outstrip communities’ ability to pay, making relocation the only viable option for many residents in low-lying areas.

North Carolina's safe, healthy, and equitable path forward

The economic and public health risks tied to climate change and described in the NCCSR and the new resilience plan demand immediate action from state leaders. As the COVID-19 pandemic and the lack of a comprehensive and timely national response from the Trump administration have revealed,¹³ significant delays in responding to public health and environmental threats can be deadly.¹⁴

The COVID-19 crisis has also highlighted the interconnection between systemic racism and injustice and environmental, public health, and economic disparities. People of color—especially Black, Native American, and Latinx people—are contracting and dying from COVID-19 at far higher rates than their white counterparts.¹⁵ Public health researchers have found that residents in polluted neighborhoods are more likely to experience the worst effects of COVID-19.¹⁶ COVID-19 death rates have been highest in communities of color and Native American communities in particular, who are often exposed to the highest levels of pollution.¹⁷ These same communities are also the most vulnerable to emergencies and disasters, including those fueled by climate change.

The current economic downturn has also hit hardest in these communities, where families were already struggling to make ends meet. Families of color are disproportionately experiencing the negative social, economic, and mental health effects of the coronavirus crisis.¹⁸ The COVID-19 pandemic is causing skyrocketing unemployment that is predicted to increase poverty rates and widen racial disparities in the same communities who are most vulnerable to the deadly threats of climate change and most exposed to pollution and other injustices.¹⁹ In addition to health and environmental injustices, people of color are often subject to discriminatory and lethal treatment by police and the criminal justice system. The murder of George Floyd by Minneapolis police and protests across the country and around the world in response have underscored the need to accelerate criminal justice reform to end racial profiling and police brutality.

In essence, the pandemic, the protests, and climate change have laid bare that long-standing public policies and practices—which create the conditions for poverty, economic instability, concentrations of pollution, and excessive use of force by police—elevate the risk of and exposure to deadly threats and the need to end racism and injustice in all forms.²⁰

As North Carolina moves to recover from the COVID-19 pandemic, it must do so in a way that implements long-needed reforms to address systemic racism, as Gov. Cooper has mandated in several new EOs. For example, EO 143 addresses the disproportionate impact of COVID-19 on communities of color, as described in more detail below.²¹ Similarly, EO 142 extended the moratorium on evictions and utility shut-offs.²² Lastly, EO 145 advances racial equity and criminal justice reforms.²³ State leaders must also be forward-thinking as they address the impending threat of climate change, including by investing in building more resilient, just, and healthy communities for all residents. This report presents six recommendations to help accomplish these goals, described in detail below.

As a state that is geographically centered in one of the highest-impact zones of tropical cyclones in the world,²⁴ science warns that the intensity and impact of severe storms and weather disasters in North Carolina will increase as a result of climate change. This news comes at a time when recent research has already revealed a trend of more devastating and costly extreme weather events and climate disasters in the state: Six of the seven highest-precipitation events on historical record in North Carolina occurred within the last 20 years,²⁵ including Hurricane Florence, which devastated the state with record-breaking storm surges and \$17 billion in damages.²⁶ Rebuilding efforts were still underway when then-Tropical Storm Michael hit the state in 2018 with another \$25 million in damages.²⁷ North Carolina's most vulnerable residents, including low-income communities, communities of color, tribal communities, and other historically marginalized populations, have been disproportionately harmed by these and other recent disasters.

The NCCSR and the Climate Risk Assessment and Resilience Plan's findings reinforce the reality that systemic and historic disparities in North Carolina, driven by discriminatory zoning and housing discrimination, exacerbate the risks and impacts of more extreme weather and other climate change impacts.²⁸ These and other systemic inequalities across the state sparked the birth of the EJ movement in 1982 when Warren County, where residents were predominately low income and people of color, was selected as the disposal site for soil contaminated

with toxic PCBs, a toxic industrial compound known to cause birth and developmental defects.²⁹ Since then, industrial livestock farms, power plants, toxic waste sites, and landfills—all with associated environmental hazards—have historically been concentrated within and alongside communities of color and low-income communities in the state, known as EJ communities.³⁰ This legacy environmental pollution continues to contaminate the air and water and threatens communities, particularly in low-lying areas and urban centers, where residents are most susceptible to flooding, heat waves, and climate disasters.

Paradoxically, the communities in North Carolina who are most at risk in a changing climate also face the greatest barriers to securing the financing needed to protect homes and strengthen critical infrastructure, including schools, hospitals, and community centers. EJ communities suffering from environmental racism in North Carolina also face disproportionate rates of energy poverty and lack access to air conditioning, a growing threat in a warming climate.³¹

The impact of the climate and COVID-19 crises on prisons

Prisons, given their crowded environments, strained health resources, and limited testing, have been particularly vulnerable to the COVID-19 pandemic as well as extreme weather, heat waves, and other climate impacts. According to the climate resilience plan, North Carolina's prisons "are often built on land that is not otherwise desirable for farming or development."³² Therefore, the majority of prisons are located in low-wealth rural communities and areas at risk of sea level rise. These communities are poorly equipped to bear the costs of lifesaving health and climate infrastructure. The existing infrastructure in many prisons and correctional facilities, including electrical and air conditioning systems, is outdated.³³ Due to these circumstances, prisoners are at high risk of COVID-19 infection and complications.³⁴ In June, a North Carolina judge ruled that conditions in state prisons were likely unconstitutional in light of the pandemic. Prisons are not built to accommodate the practices necessary to avoid COVID-19 transmission. Currently, close to 1,500 incarcerated people have tested positive for COVID-19 across the state's more than 50 prisons. And nationally, more than 1,000 prisoners and correctional officers have died due to the virus.³⁵ Research suggests that the COVID-19 infection rate in U.S. prisons is as much as five times the general population's infection rate, and inmates have also been dying at higher rates than those in the general population.³⁶ North Carolina's Climate Risk Assessment and Resiliency Plan highlights that correctional facilities must be included in statewide resilience and justice efforts, underscored by the deadly impacts of the COVID-19 pandemic.

In light of the state’s leading scientific experts’ findings on the growing public health and economic consequences of climate change impacts in North Carolina, state leaders have an opportunity and responsibility to respond in ways that address historic inequities head-on. Gov. Cooper has already demonstrated leadership in pursuing a comprehensive approach to tackling climate change and transition to a clean energy economy that is focused on advancing equity and justice in the state. The governor’s holistic strategy, laid out in EO 80, aims to reduce state-wide emissions by 40 percent below 2005 levels, expand the number of registered zero-emission vehicles (ZEV) to 80,000, and lower energy use by state-owned buildings by 40 percent by 2025.³⁷

The EO requires all Cabinet agencies to assess climate risks and infuse adaptation and resilience strategies into their programs and operations and to “support communities and sectors of the economy that are vulnerable to the effects of climate change.” EO 80 also called for the development of North Carolina’s Clean Energy Plan, a ZEV plan, and a comprehensive energy, water, and utility use conservation program, among other actions.

When Gov. Cooper signed EO 80, many North Carolinians were still recovering from the effects of Tropical Storm Michael and Hurricane Florence. An October 2018 poll by Elon University found strong support for actions to reduce the risks of climate change: Seventy-six percent of voters approved of limiting real estate development in areas at risk of flooding, 72 percent supported stronger regulations for coal ash ponds, 62 percent backed integrating climate change science into local planning, and 59 percent endorsed improving environmental regulations for hog farms.³⁸ According to a July 2020 NBC News/Marist poll, Gov. Cooper has a 59 percent approval rating among North Carolina voters, bolstered in part by the governor’s actions to reduce the risks of the coronavirus in the state.³⁹ The fact that a governor from a southeastern state—a region where many lawmakers deny climate change science and actions to address climate change have been slow to materialize—was able to take bold action on climate change without suffering political ramifications is an important lesson that should serve to embolden other governors to take ambitious climate action in their states.

To confront historic environmental injustice and the added threat of the COVID-19 pandemic, in June 2020, Gov. Cooper signed EO 143, which specifically ties to EO 80’s climate goals, including a call to prioritize “actions that equitably reduce greenhouse gas emissions, increase community resilience to the impacts of climate change, and advance sustainable economic and infrastructure recovery efforts

for low-income, minority and vulnerable communities.⁴⁰ EO 143 establishes the Andrea Harris Social, Economic, Environmental, and Health Equity Task Force to create economic stability, eliminate health disparities, and achieve EJ in the state. In addition, the state's 2019 Clean Energy Plan and the new Climate Risk Assessment and Resilience Plan mandated by the governor both include chapters and policy recommendations dedicated to supporting energy, climate, and EJ. Lastly, North Carolina Secretary of Environmental Quality Michael Regan formed the Environmental Justice and Equity Advisory Board in 2018.⁴¹ The board advises the North Carolina Department of Environmental Quality (DEQ) on issues related to EJ.⁴² Despite this progress, the state still lacks a state statutory commitment to fully address climate change and structural environmental racism.

North Carolina state leaders have taken bold steps to confront issues of climate risk, environmental injustices, and public health and safety. However, the ongoing and worsening threat of climate change requires state leaders to accelerate climate action by providing access to pollution-free energy and building healthy, strong, and climate change-ready communities and infrastructure.

Building safe, healthy, and resilient communities and infrastructure

North Carolina's communities are on the front lines of extreme weather and sea level rise, particularly in coastal areas. For this reason, Gov. Cooper's EO 80 mandated the DEQ to produce a Climate Risk Assessment and Resilience Plan, published in June 2020, as part of a broader effort to support communities and businesses that are vulnerable to climate change effects.⁴³ As the state implements climate justice recommendations from its resilience plan, including the recommendation to develop a North Carolina Climate Justice Report as part of future North Carolina resilience plans,⁴⁴ it must prioritize actions to address the unjust reality that low-income communities and communities of color are often the most vulnerable to climate change. These communities often have few resources to prepare for or recover from extreme weather events, high exposure to heavy concentrations of pollution, and outdated infrastructure and homes in desperate need of repair.

To address the many challenges in these communities that stem from historic economic, racial, and environmental inequality, the state agencies should consider adopting the priorities agreed upon by EJ leaders and environmental organizations across the country in the Equitable and Just National Climate Platform. The platform was signed by more than 300 EJ and national environmental organizations and calls for bold and equitable state and national climate policies that improve air quality; increase access to affordable and sustainable electricity, water and transportation for every community; support a rapid transition toward an inclusive, just and pollution-free energy economy; and build safe and healthy infrastructure and communities.⁴⁵

In addition, to protect the health and well-being of all North Carolinians and build safe and resilient communities in the midst of the COVID-19 pandemic and ongoing climate crisis, state leaders must take the actions described below.

Create standards for building clean and resilient infrastructure and housing

North Carolina’s Climate Risk Assessment and Resilience Plan recommends that the state enact policy changes to “[r]educ[e] substandard housing and increase access to adequate cooling and other climate risk reduction measures” as well as “[a]dvocate for funding for new or continuing weatherization programs that target low-income homeowners.”⁴⁶ These goals should be paired with similar goals to support energy efficiency, electrification, and zero-carbon in building stock for all residences—including apartments and rental units. In implementing these policy changes, state leaders must ensure that infrastructure, residential and commercial buildings, and housing are built to withstand more extreme weather and climate change disasters and that all new building follows guidelines for zero-carbon buildings and energy efficiency.

As a first step, the state legislature should pass legislation that requires new or rebuilt development—and any infrastructure investments—to take into account the risks and scientific realities of future sea level rise. Specifically, the state should require that new coastal development and all coastal renovations, rebuilds, and infrastructure projects be designed to take into account sea level rise estimates through 2100, which will be included in the forthcoming 2020 North Carolina Sea-Level Rise Assessment Report,⁴⁷ as well as other climate change risks.

In addition, to address the climate risks to and inequities in housing and buildings highlighted in the Climate Risk Assessment and Resilience Plan, the DEQ should work closely with the governor’s office, the North Carolina Office of Recovery and Resiliency (NCORR), the North Carolina Building Code Council (NCBCC), and the North Carolina Housing Finance Agency (NCHFA), to develop new standards and guidelines for homes, rental units, and commercial buildings that are energy efficient and zero-carbon; built with high-quality materials and to withstand more intense heat waves and more extreme storms; and take into account the NCCSR’s projections of flooding and sea level rise. Developing statewide standards to build more clean, resilient, and future-ready infrastructure and buildings would help to reduce costly damages and public health risks in the wake of more extreme weather emergencies and disasters.

In 2013, the North Carolina General Assembly rolled back the 2012 building codes to reflect older, less up-to-date standards from 2009, losing an estimated 30 percent of the efficiency gains.⁴⁸ New guidelines must be developed to improve

energy efficiency across the state as well as enable and require building decarbonization. These new guidelines should be developed in collaboration with state EJ groups and climate and energy experts through an inclusive and transparent public engagement process.⁴⁹

The NCORR was created to deploy disaster recovery funds in ways that mitigate the risk of future storms and has the authority to set requirements for residential and commercial buildings built with disaster recovery funds. Development of general building standards are under the authority of the NCBCC. These two agencies should work together to develop building and infrastructure design standards that take climate change risks into account to ensure that new buildings and infrastructure are built to last.

Prioritize equitable housing policies and just and resilient community development

Damage caused by flooding, more severe storms, and other extreme weather events exacerbated by climate change will likely reduce the already limited supply of affordable housing in North Carolina, straining homeownership for low-income communities.⁵⁰ Much of the state's existing affordable housing is located in areas vulnerable to riverine flooding from increased climate-driven precipitation and extreme weather—and much of the current affordable housing stock lacks the needed flood protections. Low-income communities and communities of color are on the front lines of climate change, as their housing and infrastructure are more likely to be older and lack needed upgrades and repairs. These communities, many of whom are renters or face additional barriers to homeownership, also have fewer resources to adapt to climate change effects; afford air conditioners or pay higher energy bills to run them; and rebuild after devastating storms and flooding.

To improve the quality, safety, and access to affordable housing in North Carolina, the DEQ should work with the NCHFA to require that new, affordable housing is built to meet the guidelines for resilient buildings recommended above.⁵¹ In addition, the state legislature should appropriate additional funds to the NCHFA to finance the construction of new safe and affordable housing units that are both energy efficient and resilient to climate change risks. Safe and affordable housing should be defined as building in locations that are not in flood zones or at high risk of flooding over the lifetime of the structure and that are close to economic opportunities, schools, health care, and other services and networks that are criti-

cal to social cohesion and quality of life.⁵² Building safe and affordable housing for front-line communities should be paired with homeownership assistance efforts to target renters, who make up a substantial portion of those living in many low-income communities and communities of color.

In addition to threatening the public health and safety of communities, more extreme weather tied to climate change exacerbates homelessness by damaging and destroying the already constrained supply of housing stock. In 2019, more than 9,300 individuals in North Carolina experienced homelessness, approximately 14 percent of whom were coping with chronic homelessness.⁵³ To address this problem, state leaders must expand state investments in rental assistance and affordable housing development; increase data collection on homelessness risks; and prioritize hazard and disaster risk-reduction investments in front-line communities before and after extreme weather disasters.

Due to the reality of sea level rise and repeated major flooding in North Carolina, many residential areas of the state are currently at irreversible risk. To end the cycle of catastrophe followed by expensive repairs, city and county officials can leverage federal and state funding to buy properties that have been repeatedly flooded and restore the land to its natural state. These buyout programs can help willing sellers of repeatedly damaged properties move to safer ground if these programs are designed to help address—rather than exacerbate—existing affordable housing shortages. Voluntary buyout programs should be coordinated and done through inclusive processes, allowing all partners to find beneficial reuses of land, such as restored streambanks or wetlands, to ensure risk reduction benefits. County and city leaders should also support new investments in high-density affordable housing units to help multiple families participating in a buyout program from the same community who want to stay together.⁵⁴

Accelerate cleanup of toxic sites and flood mitigation

Communities located near toxic Superfund sites, coal ash storage ponds, active industrial polluters, and concentrated animal feeding operations (CAFOs) face elevated environmental and public health risks, particularly during and after extreme weather events and flooding. For example, flooding can inundate areas where coal ash, animal waste, and other hazardous materials are stored, turning flood waters into a dangerous mix that can leave a toxic residue in its wake, as

Hurricane Florence proved in 2018 when the storm caused coal ash to pollute the Cape Fear River and more than two dozen hog CAFOs discharged toxic waste due to lagoon flooding.⁵⁵

Accelerating cleanup of polluted sites and strong protections to prevent coal ash, animal waste, and other dangerous substances from harming nearby communities, particularly during extreme weather events and flooding, is crucial to safeguarding public health. In addressing the high risk of flooding identified in the Climate Risk Assessment and Resilience Plan, North Carolina's state leaders should strengthen and enforce safety requirements for toxic sites to ensure they don't leak hazardous substances during emergencies or disasters or pose other public health risks to communities. State leaders should require CAFOs to install "environmentally superior technologies," a term of art that requires replacement of the current waste lagoon and manure spray system to reduce contamination risk, including during extreme weather events and flooding.⁵⁶

There are 42 federally recognized National Priorities List Superfund sites in North Carolina. The DEQ Division of Waste Management has also identified more than 1,900 inactive hazardous waste sites that are not included on the federal registry and are not currently monitored or undergoing cleanup by national programs.⁵⁷ According to the Duke University Superfund Research Center's map—developed after Hurricane Florence caused widespread damage to the state—there are six Superfund sites at risk of flooding in eastern North Carolina.⁵⁸ To make matters worse, during the Trump administration, U.S. Environmental Protection Agency (EPA) Superfund cleanup efforts have stalled. For example, the EPA has not yet announced a cleanup plan to address the contaminated groundwater, surface water, soil, and fish and plant life at the 758-acre Wright Chemical Corp. in Columbus County, despite its placement on the national Superfund list in 2011. The site includes a facility that produces hexamine, formaldehyde, organophosphates, and other chemicals; two shuttered sulfuric acid plants; and, among other hazards, impoundment ponds, unlined lagoons, and a waste pile.⁵⁹ Moreover, a former phosphate fertilizer manufacturer began operating on the site in the 1880s. The site, located in the Cape Fear River Lowlands, is on Duke's list of sites at high risk of flooding, indicating that it poses heightened risk to nearby communities during flooding and storms.⁶⁰

In addition to strengthening and enforcing safety requirements for toxic sites, state leaders should increase funding and support for the DEQ's Division of Waste Management, which deals with toxic site cleanup, and ensure that immediate

actions to address community risks from and concerns about toxic sites are prioritized. While much of the authority for Superfund-designated sites fall under the EPA's jurisdiction, the DEQ is responsible for coordination with federal efforts, as well as monitoring and cleaning up the other nearly 2,000 toxic chemical sites, landfills, and dry-cleaning contamination sites.

State leaders should also prioritize and expedite cleanup of toxic sites—Superfund or otherwise—near residential areas, watersheds, and coastal areas at risk of flooding due to increased storms and sea level rise. In addition to expediting site cleanup, the DEQ should support innovative ways to repurpose and redevelop cleaned-up sites through community-driven plans that include strategies to prevent the displacement of existing residents and air and noise pollution; reduce flooding and other climate change risks; and protect water resources and the environment.⁶¹ For example, in Spartanburg, South Carolina, the state's Department of Health and Environmental Control partnered with the ReGenesis Project, a community development corporation that advances EJ; Duke Energy; and groSolar, a Vermont-based solar development company, to expedite cleanup of a former landfill filled with toxic medical waste and a 30-acre Superfund site where a fertilizer plant had once operated. Hazardous chemicals and sewage from these sites were seeping into the groundwater and causing cancer, respiratory illness, sepsis, and other serious health conditions that led to high death rates in the community next to these sites. After demanding and securing the cleanup of these sites, the ReGenesis Project leveraged a small EJ grant from the EPA to develop a community-led plan to revitalize the community and to build a health center, establish a job training program, and advance plans to develop a solar farm.⁶²

Newly cleaned-up Superfund sites can be redeveloped into recreational open spaces, enhancing the public health and social fabric infrastructure of communities.⁶³ Additionally, creating green spaces and restoring wetlands and other natural areas can help absorb large volumes of storm water that would otherwise overwhelm sewer systems and agriculture waste sites and prevent toxic runoff from flowing into waterways, protecting the public health and safety of nearby communities.⁶⁴ By investing in the cleanup and restoration of toxic sites across the state, community-led redevelopment plans, and green infrastructure, North Carolina state leaders can reduce flood risks and protect the health and safety of residents, particularly in low-income communities and communities of color.

Hog farm pollution reduction and flood mitigation

In implementing recommendations from the Climate Risk Assessment and Resilience Plan, the DEQ and other state agencies must address the methane capture and anaerobic digestion operations sited at CAFOs across the state.⁶⁵ Hog and other livestock feces stored in open-air pits, or hog lagoons, on CAFOs in North Carolina have created serious environmental and human health hazards, particularly for low-income communities and communities of color where CAFOs are often located. To address the health risks and noxious odor of CAFOs and to generate renewable electricity, Dominion Energy and Smithfield Foods have supported an expansion of biogas projects, which cover hog lagoons and capture the methane emissions for use as natural gas.⁶⁶ While biogas projects cause methane that would otherwise have been released into the atmosphere to combust into carbon dioxide, which is a less potent greenhouse gas, methane capture systems do not address the hazards of CAFOs for nearby communities. These hazards may include groundwater contamination or lingering odors that affect the well-being and quality of life of surrounding communities. These operations also do not address the risk of methane leakage, which would significantly reduce or eliminate the greenhouse gas benefits of biogas projects. In addition, the CAFO industry is largely self-regulating and self-reporting, as it is the operator's responsibility to report equipment damage, spillages, and leaks and to record when the lagoon is stocked with waste and when waste is applied to land.⁶⁷

Biogas projects should not be considered a substitute for better enforcement of environmental protections that are needed to actually address the harmful practices of lagoon waste storage and spraying fields, which add to the cumulative impacts of pollution in North Carolina's low-income communities and communities of color.⁶⁸ For example, communities near hog farms are hit with a foul mist from the CAFOs spraying waste on fields as manure. The pervasive odor and airborne irritants produced by these practices cause serious problems for neighbors of confinement operations. Communities are also exposed to pathogens as hog waste stored in lagoons leaches into groundwater. Residents living near large hog farms have higher cases of disease and death rates as well as mental health concerns.⁶⁹ These health risks are heightened by flooding and other climate change effects. Currently, there are 62 hog CAFOs located within the 100-year flood plain, and these operations generate more than 200 million gallons of waste per year.⁷⁰ In 2018, damage from Hurricane Florence caused millions of gallons of animal waste to spill out of waste lagoons, contaminating the southeastern region of North Carolina's groundwater and polluting water along the entire North Carolina coastline.⁷¹

One of the few entities that has continuously worked to develop affordable biogas-based full environmental solutions to swine waste management is Duke University. Despite the existence of add-on components that would bring biogas projects up to those standards, many CAFOs implement projects that pose pollution risks, particularly during severe weather events, and diminish quality of life in nearby communities. Energy producers who partner with large CAFOs are

reinforcing this biogas-focused approach to keep development costs down, despite making very large returns on the biogas produced. As the world's third-largest hog producer,⁷² North Carolina has the potential to set a global standard on fully responsible pork production. State leaders should seize this opportunity by working with Duke University and others committed to full environmental solutions to design pollution-reduction and safety guidelines for biogas projects that reduce noxious odors, address ammonia, pathogen, and nutrient issues, all while capturing methane and producing renewable natural gas. The state also should increase funding to flood plain buyout programs that move CAFOs out of flood plains and consider strengthening siting restrictions on new farms.

Unlike hog CAFOs, poultry CAFOs are virtually unregulated in North Carolina. There are now more than twice as many poultry CAFOs as hog CAFOs in the state, and these operations contribute more nutrient pollution than hog farms while keeping a lower profile because much of the data on poultry farms are unavailable to the DEQ, state leaders, and the public.⁷³ The DEQ should require increased data on environmental impacts from poultry CAFOs and ensure that safety and pollution-reduction guidelines and flood protection measures for hog farms are also extended to poultry CAFOS.

Building a pollution-free, just, and equitable clean energy economy

In September 2019, North Carolina’s DEQ—along with input from various stakeholders, academic researchers, and community groups—released its first Clean Energy Plan,⁷⁴ a foundational framework developed in accordance with Gov. Cooper’s EO 80 to address the highest-emitting sector of North Carolina’s economy.⁷⁵ The plan’s three overarching goals are bold and laudable and aim to:

1. Reduce electricity power sector greenhouse gas emissions to 70 percent below 2005 levels by 2030 and attain carbon neutrality by 2050.
2. Foster long-term energy affordability and price stability for North Carolina’s residents and businesses by modernizing regulatory and planning processes.
3. Accelerate clean energy innovation, development, and deployment to create economic opportunities for both urban and rural areas of the state.

Separately, state leaders released a zero-emission vehicle plan to deploy 80,000 electric vehicles and electrify government fleets, as well as a North Carolina Department of Commerce workforce assessment around new clean energy jobs.⁷⁶

In addition to adopting the recommendations above, the DEQ should take the following steps to equitably implement the Clean Energy Plan; reduce pollution and greenhouse gas emissions; and build healthy and safe communities and infrastructure for all North Carolina residents.

Ensure equitable access to clean and affordable energy

Given the disparities in housing stock and infrastructure across North Carolina’s communities, it is imperative that the state’s future energy system ensures that all communities can access affordable and pollution-free energy options. Specifically, state leaders should prioritize energy efficiency improvements in low-income

communities to lower energy bills and improve air quality. The Clean Energy Plan's proposed Energy Efficiency Advisory Council must ensure that low-income families and small businesses can access energy efficiency retrofits through a weatherization and electrification assistance program by providing equitable and multilingual access to information about the program and technical assistance, reducing paperwork burden, and removing other barriers to participation.⁷⁷

State leaders can also increase access to sustainable and affordable energy options by creating a statewide green energy bank. The Center for American Progress and the Nicholas Institute for Environmental Policy Solutions have both outlined potential funding sources for such a bank, which could be financed through funds appropriated by the state legislatures, private funds, or philanthropic funds.⁷⁸ Furthermore, if congressional legislation calling for a national climate bank is passed, state-level green banks could receive additional federal funding.⁷⁹ As recommended in the Clean Energy Plan and the North Carolina's Zero-Emission Vehicle Plan, a green energy bank should be designed and implemented to prioritize investments in low-income communities, tribal communities, and communities of color.⁸⁰ These investments should aim to ensure disadvantaged communities have equitable and affordable access to energy efficiency and renewable energy technologies, as well as support community energy planning and energy choice programs.⁸¹

If well designed, a green energy bank could bring sustainable investments into EJ communities, catalyzing the development and expansion of renewable energy markets to benefit areas with acute financial need and in which high portions of a household's income goes toward the electricity bill. Well-designed green banks can help coordinate cross-agency efforts for clean energy investment and facilitate a collaborative approach to local engagement and consumer education.⁸²

State leaders should ensure that the proposed green energy bank establishes a fair and transparent project review process; includes metrics to meet social, environmental, and economic measures; and includes a strong investment plan informed by local government and community leaders' input.⁸³ State leaders should require that at least 40 percent of the fund's capital be invested in communities with the greatest need.⁸⁴ The fund must also require state leaders to establish diverse managing boards that have the expertise needed to support public accountability, effective fiscal oversight, meaningful community engagement, and invest in innovative and equitable clean energy projects.

As recommended in the Equitable and Just National Climate Platform, state leaders should support investments in cooperative and nonprofit energy organizations; community participation in energy planning; and renewable and energy efficiency projects in economically disadvantaged communities, communities of color, and tribal communities in order to ensure equitable access to clean and affordable energy.⁸⁵

Support a just transition to clean energy

North Carolina’s leaders must ensure that the economic and environmental benefits of the Clean Energy Plan support the hardest-hit workers and communities, including the industries and communities that are most likely to be affected by climate change and the transition to a clean economy. The Clean Energy Plan recommends launching an EE Apprenticeship Program to expand access to clean energy careers, as well as creating long-term jobs with family-sustaining wages and benefits in the renewable energy and grid infrastructure industries for low-income communities and workers displaced by the transition to a clean energy economy.⁸⁶ This program aligns with the Equitable and Just National Climate Platform’s recommendation to invest in “workforce and job training programs, especially in communities with disproportionately high underemployed and unemployed populations and in communities that have been historically reliant on fossil fuel extraction and energy production.”⁸⁷

To ensure the program meets the needs of economically disadvantaged communities, the DEQ and the state’s Community College System must meaningfully involve historically marginalized communities in the program design and provide substantial funding to support the program’s implementation. State leaders must also work internally within their own institutions and with the clean energy and other industries to dismantle systemic racism and other economic and employment barriers faced by people of color to ensure that all people—regardless of race, gender, ethnicity, or religion—can access good jobs.

The Solidarity for Climate Action Platform developed by the BlueGreen Alliance defines high-quality careers as those that advance solutions to climate change and “[apply] mandatory labor standards that include prevailing wages, safety and health protections, project labor agreements, community benefit agreements, local hire, and other provisions and practices that prioritize improving training, working conditions, and project benefits.”⁸⁸ North Carolina state leaders should encourage the clean energy industry to adopt and meet these labor standards by

requiring such standards for any state-funded clean energy projects. In addition, clean energy incentives directed at the private sector should promote the inclusion of high labor standards. To empower workers, North Carolina’s just transition to clean energy should also expand and improve access to unionization through the EE Apprenticeship Program and other avenues.

Lastly, as underscored by the North Carolina Climate Risk Assessment and Resilience Plan and the COVID-19 pandemic and recommended by the Equitable and Just National Climate Platform, North Carolina state leaders should “increase the capacity of the public sector, the health care system, and community-based non-profit sectors to prepare for and respond to the demands our changing climate places on first responders, healthcare workers, social workers, and others who deal with climate-induced disasters.”⁸⁹ EO 143 aims to address this need by supporting access to health care for underserved communities and enhanced patient engagement in health care settings. The Risk Assessment and Resilience Plan acknowledges, “Resilience services will require greater interagency support and resources. Operational, logistical, maintenance, and resiliency challenges are synergistic in nature. All must be simultaneously addressed.”⁹⁰

Foster inclusive and equitable public engagement

The Clean Energy Plan and Gov. Cooper’s recent EO 143 both highlight the need for public engagement to ensure that the executive branch and other state leaders support inclusive policies that advance equity and environmental and climate justice. To implement all aspects of the Clean Energy Plan, ensure equitable access to clean energy, and support a just transition to pollution-free energy sources, the DEQ must thoughtfully and intentionally engage EJ leaders, members of low-income communities, state-recognized tribes, and communities of color in the plan’s implementation. Any decision-making regarding the siting of electricity generation assets and programs that would affect energy bills, public health, and access to clean energy and energy efficiency opportunities should include representative voices of North Carolina’s EJ communities. For example, the North Carolina Climate Risk Assessment and Resilience Plan’s Climate Justice chapter calls for the Climate Change Interagency Council to release a North Carolina Climate Justice Report as part of future resilience plans with opportunities for public involvement. As recommended in the resilience plan, the state’s Climate Justice Report should be developed through an inclusive process to incorporate the input of EJ advocates and community members and leaders.⁹¹

The DEQ should define stakeholder groups to include significant representation from the eight recognized tribal communities in North Carolina,⁹² communities of color, low-income communities, and EJ groups. Lastly, state officials should hold well-publicized, accessible, inclusive, and participatory public meetings within communities throughout North Carolina to solicit direct input from residents most vulnerable to toxic pollution and more extreme storms, heat, flooding, and other climate impacts.⁹³

Conclusion

As North Carolina state leaders work to respond to the COVID-19 pandemic, they must also plan for and address other pressing public health and safety threats, including the NCCSR's stark warnings of more intense heat waves, more powerful storms, sea level rise, and other climate change impacts that threaten the health and livelihoods of North Carolinians well into the future.

By taking the actions recommended in this report and those laid out in EO 80 and EO 143, as well as in the state's Clean Energy Plan and Climate Risk Assessment and Resilience Plan, North Carolina state leaders can make progress toward addressing climate change while advancing economic, racial, and environmental justice in communities across the state. State and local policies and plans to combat climate change must be developed with input from communities; prioritize investments in climate-ready infrastructure and housing in historically marginalized communities; and address the cumulative impacts of pollution, historical inequities, and systemic and environmental racism prevalent in the state. These and other policies must be developed and implemented without delay to protect the public health and safety of communities across the state and to support rapid movement toward a just, inclusive, and pollution-free energy future.

Lastly, leaders of other states should follow Gov. Cooper's lead in committing to a bold, comprehensive, and holistic set of climate actions centered on equity and justice. By committing to these actions without political ramifications, Gov. Cooper demonstrated that there is no excuse for delaying climate action. Governors across the country and from other southeastern states must also commit to ambitious, equitable, and comprehensive climate plans to ensure that all people in the United States can live safe, healthy, and prosperous lives.

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Our Mission

The Center for American Progress is an independent, nonpartisan policy institute that is dedicated to improving the lives of all Americans, through bold, progressive ideas, as well as strong leadership and concerted action. Our aim is not just to change the conversation, but to change the country.

Our Values

As progressives, we believe America should be a land of boundless opportunity, where people can climb the ladder of economic mobility. We believe we owe it to future generations to protect the planet and promote peace and shared global prosperity.

And we believe an effective government can earn the trust of the American people, champion the common good over narrow self-interest, and harness the strength of our diversity.

Our Approach

We develop new policy ideas, challenge the media to cover the issues that truly matter, and shape the national debate. With policy teams in major issue areas, American Progress can think creatively at the cross-section of traditional boundaries to develop ideas for policymakers that lead to real change. By employing an extensive communications and outreach effort that we adapt to a rapidly changing media landscape, we move our ideas aggressively in the national policy debate.

