

Measuring Success

Chapter 22. Essential Elements

With State-level actions such as the passage of the Climate Act and continued procurement of large-scale renewable energy resources, New York has proven to be a leader in addressing climate change. The release of the Scoping Plan advances New York to the next level. It has been well-established that the threat of climate change is great and can only be fully addressed when stakeholders are in alignment and coordinate mitigation efforts. Success of this Scoping Plan requires several essential elements including partnerships, outreach and education, and workforce and economic development.

22.1 Partnerships

New York witnessed the importance of partnerships firsthand in the response to the COVID-19 pandemic. From supply chains, businesses, and people to science, resources, and policies, New York is inextricably linked to the international community. When New York leads, the results echo loudly to its peers, but it cannot stand alone. Partnerships with a wide range of entities will be critical to ensure the success of this Scoping Plan and reaching the State's climate directives. New York has long been part of collaborative environmental projects and programs at the federal, regional, and local levels. Programs such as Regional Greenhouse Gas Initiative (RGGI) and participation in the U.S. Climate Alliance have enabled New York to make progress at the State level while having a greater regional and national impact.

Continued collaborative efforts are critical to ensure successful and consistent climate policy on a greater scale. While New York continues to act at the State level, federal action, and continued cooperation at the regional and national levels, is vital to increase overall policy effectiveness and minimize leakage to the greatest extent. When all levels of government work together, climate action is accelerated, resources are shared more efficiently, and jurisdictions can address the impacts in a more holistic way.

Climate change and the policy development required to address it presents a unique need and a unique opportunity for interagency collaboration at the State level. Dozens of State entities were engaged in the process and supported the development of this Plan. While New York State Department of Environmental Conservation (DEC) and New York State Energy Research and Development Authority (NYSERDA) will continue to lead in the implementation of the Climate Act, collaboration must continue and expand as the State moves forward with implementing the Scoping Plan. Meeting the greenhouse gas (GHG) emission reduction requirements and the need to build resiliency to adapt to the changing climate will

require action from all State agencies and authorities, as well as continued cooperation between agencies, authorities, and the Legislature.

Federal Action

Several strategies in this Plan highlight the opportunity to leverage new federal action for New York. While New York will continue to lead on climate action, a cohesive national approach will provide the emission reductions of a scale necessary to mitigate potentially catastrophic climate change. Historically, the federal government has taken measures to address climate change and reduce GHG emissions through the Clean Air Act and related actions, such as the regulation of GHGs from cars, trucks, and buses. More recently, the Biden Administration set a target to reduce economywide GHG emissions by 50% to 52% of 2005 levels by 2030. Additionally, and as referenced in *Chapter 2. The Time is Now to Decarbonize Our Economy*, the Biden Administration is leveraging its purchasing power through a Buy Clean policy to promote the use of construction materials with lower-embodied emissions and pollutants. Recent action to implement the American Innovation and Manufacturing Act and sign the Kigali Amendment to the Montreal Protocol to phasedown hydrofluorocarbons (HFCs) is reassuring to see the federal government once again taking responsibility for controlling HFC emissions and reinstating its leadership role in international policy. The federal government's strides to increase offshore renewable energy development and expand transmission capacity is critical to the transition to a clean economy. The White House also recently released a report to the National Climate Task Force that recommends actions to accelerate nature-based solutions for climate progress. These recommendations include updating permitting and environmental review processes, incentivizing nature-based resilient infrastructure, leading by example in management of federal facilities, workforce training, and continued research and innovation.³³⁵

The Biden Administration's Justice40 Initiative is critically important to climate action at the federal level and important to consider in the context of New York's leadership in this area and the Climate Act's robust climate justice requirements and goals. This initiative seeks to address the history of national environmental policy decisions that have failed to adequately account for environmental injustice, including the disproportionate, disparate, and cumulative impacts pollution and climate change have on low-income communities and communities of color. The recently released Climate and Economic Justice Screening Tool will help federal agencies better identify communities that can benefit from this initiative.

³³⁵ White House Council on Environmental Quality, White House Office of Science and Technology Policy, White House Domestic Climate Policy Office. 2022. *Opportunities for Accelerating Nature-Based Solutions: A Roadmap for Climate Progress, Thriving Nature, Equity, and Prosperity*. Report to the National Climate Task Force. Washington, D.C.

The consideration of environmental justice and impacts to overburdened and underserved communities at the federal level, and careful coordination between the State and federal government, will amplify the benefits New York’s Disadvantaged Communities will realize from the Climate Act.

As is the case at the State level, and as is highlighted across the sector strategies, an important complement to these federal programs and initiatives is funding. The recent enactment of the Infrastructure Investment and Jobs Act, the Inflation Reduction Act, and the CHIPS and Science Act provides critical support to not only adapt to and mitigate climate change, but these acts also seize economic development opportunities that are associated with the transition to a clean economy. New York will continue to advocate for additional statutory and regulatory measures to reduce GHG emissions and to green the electricity grid while communicating the importance of avoiding federal preemption and allowing states to take additional action.

Federal Resources to Support Climate Action and a Just Transition in New York

Through the combination of the Infrastructure Investment and Jobs Act, the Inflation Reduction Act, and the CHIPS and Science Act, there are now unprecedented levels of federal funding available to support climate action and the realization of a just transition in New York. There are numerous federal programs and incentives that should be leveraged in New York to drive the transition to a clean energy economy and support a just transition.

- Clean energy manufacturing tax credits to support buildout of domestic supply chains and high-road manufacturing careers, including similar wage and apprenticeship requirements
- Hydrogen production and investment tax credits including similar prevailing wage and apprenticeship requirements
- Investment tax credit for commercial geothermal and thermal energy storage systems, which will be beneficial to community thermal energy network deployment and cost-effectiveness
- Advanced nuclear electricity tax credits and research and development funding, along with Zero-Emission Nuclear Power Production Credit for existing nuclear facilities (with prevailing wage requirement)
- Tax credits for Qualified Advanced Energy Projects, which offer funding to industrial/manufacturing projects that re-equip an industrial or manufacturing facility with equipment designed to reduce greenhouse gas emissions or re-equip, expand, or establish an industrial or manufacturing facility for the processing, refining, or recycling of defined critical materials

- Numerous requirements for the payment of prevailing wage, utilization of apprenticeships, and domestic content to receive full and bonus values for most/all clean energy tax credits
- Energy community bonus adders for many clean electricity tax credits, making it more economical to site projects located at a brownfield site, in a metropolitan area with elevated local employment/tax revenues from fossil fuel industries, or in a metropolitan area suffering a recent coal power plant or coal mine closure
- Electric vehicle (EV) tax credits with requirements for final assembly in North America, supporting existing and future growth of U.S. auto manufacturing and associated workforce, as well as funding to build out a network of EV chargers
- Investments in public transit, including over \$2.1 billion to New York in 2022
- Funding through the U.S. Environmental Protection Agency (EPA) to replace existing school buses with zero- and low-emission models
- Alternative Fuel Refueling Property Credit for property placed in service through 2032, including prevailing wage and apprenticeship requirements
- \$2 billion in grants to re-tool existing auto manufacturing facilities to produce hybrid, plug-in electric hybrid, plug-in electric drive, and hydrogen fuel cell electric vehicles
- New Sustainable Aviation Fuel Credit for the sale or use of a qualified mixture of Sustainable Aviation Fuel and kerosene in the U.S. after 2022 through 2024, and new Clean Fuel Production Credit for low-emissions clean transportation fuel produced after 2024 and sold prior to 2028
- New financing mechanisms for infrastructure reuse and repurposing, through the U.S. Department of Energy's Loan Program Office
- Funding for infrastructure resilience, including funds through the Army Corps of Engineers for flood mitigation

The federal government also recently made significant investments in U.S. national laboratories, including approximately \$200 million for the Brookhaven National Laboratory. These funds will, in part, support clean energy research.

New York has also recognized gaps that have been left by the federal government in the past and has taken action to address them. When the federal government withdrew from the Paris Agreement, New York worked collaboratively and formed the U.S. Climate Alliance, which enables states to collectively commit to reducing emissions consistent with the goals of the Paris Agreement and share data and best practices to set and achieve climate goals. This partnership has enabled actions like the development of shared roadmaps, model regulations, and guidance for action such as to protect natural and working lands,

enable building electrification, reduce short-lived climate pollutants, and integrate the Social Cost of Greenhouse Gases into state policy.

Regional Collaboration

Northeast and Mid-Atlantic states have a history of working together to explore regional policies to reduce carbon emissions and other pollutants. Most states in the region, as well as the District of Columbia, have set economywide GHG reduction goals through statute, executive order, or in climate change or energy plans. The Climate Act requires a different accounting framework for GHGs than is typically used by other jurisdictions, and while there is no standard or consistent mechanism or accounting framework across states for these policies and goals, working in partnership with other jurisdictions can magnify the benefits and reduce the costs of climate action.

As a participant in RGGI, the first cap-and-invest program in the U.S., New York has used this regional market-based mechanism to drive down GHG emissions in the power sector, while raising funds for environmental initiatives statewide. New York has also taken more recent regional action, including signing a Memorandum of Understanding with 14 other states and Washington, D.C., to commit to a goal that 100% of all new sales of medium- and heavy-duty (MHD) trucks be zero-emission vehicles (ZEVs) by 2035. New York also participates in several and various regional research initiatives and programs:

- Great Lakes Commission
- Great Lakes St. Lawrence Governors and Premiers³³⁶
- Great Lakes Wind Feasibility Study
- Chesapeake Bay Watershed Program³³⁷
- The Peconic Estuary Partnership
- Hudson River Estuary Program
- Hudson River National Estuarine Research Reserve³³⁸

³³⁶ Members of Great Lakes St. Lawrence Governors and Premiers work as equal partners to grow the region's \$6 trillion economy and protect the world's largest system of surface fresh water.

³³⁷ The Chesapeake Bay is the largest estuary in the United States. It is home to more than 2,700 species of plants and animals and produces about 500 million pounds of seafood per year. The Bay's watershed covers portions of six states and Washington, D.C.

³³⁸ Information regarding the partnership between the National Oceanic and Atmospheric Administration, DEC's Office of Climate Change, and the U.S. Climate Alliance can be accessed at <https://www.hrnerr.org/usca-prioritizing-nys-coastal-wetlands-for-resilience-and-blue-carbon/>.

These initiatives enable governments to share data and collaborate on potential solutions to climate-related issues facing various communities. It illustrates that there are several different ways for states to participate on a regional scale. New York will continue to strive for regional participation in order to use the most cost-effective and efficient options for GHG mitigation.

Supporting Local Governments

Local governments are on the frontlines of addressing climate change. Local leaders are the most well-equipped to understand community needs and are uniquely positioned to take action that will reduce GHG emissions. Implementing many of the strategies in this Scoping Plan will require action by local governments. New York's local governments have their hands full meeting the day-to-day needs of their communities. These strategies will not be successful without providing adequate support for local governments. New York has worked to address this through programming across several agencies. The Climate Smart Communities program at DEC offers technical assistance and guidance as well as grant opportunities to local governments. It enables participating governments to transition to a clean economy and improve their climate resiliency. Through its NY-Sun program, NYSERDA offers guidance and technical assistance to local governments to facilitate the expansion of solar development, and through its Clean Energy Communities program, NYSERDA distributes grants to local communities that showcase actions that have a high impact on the community's ability to become more sustainable overall.

New York also supports local governments through the Regional Economic Development Council (REDC) initiative. Through a consolidated funding process, regional councils can apply for grants for different projects and programs, many of which are geared toward environmental protection.

Continued support of New York's local governments is critical to enable the State to take climate action. Strategies in *Chapter 19. Land Use* and in *Chapter 20. Local Government* provide a solid foundation to support local government decision-making to meet the emission limits. Initiatives in these chapters include the development of a community dashboard to promote local planning and measure progress and strategies to enable the deployment of renewable energy resources across the State.

Other Partnerships

Partnerships will need to expand beyond governmental actors in order to successfully mitigate and adapt to climate change. The sector strategies discuss the dozens of stakeholders that should be engaged when considering and implementing the GHG emissions mitigation strategies in this Plan. Stakeholder engagement in the implementation of the Scoping Plan is essential to ensure the policies and programs are

responsive to the needs of the stakeholder community and meet the equity requirements of the Climate Act. New York will continue to seek collaborators such as educational institutions, community-based organizations, labor, industry, and not-for-profit organizations, as well as engage in public/private partnerships. The New York SmartGrid Consortium is one example of a wide variety of entities working together to improve the reliability and resiliency of the electric grid.³³⁹ Economywide cooperation is critically necessary to address climate change. These partnerships have proven successful and will need to expand moving forward. While New York can and will continue to set examples for other states through statewide action, this Scoping Plan recommends advocacy for additional action at the federal level, as well as cooperation with regional and local governments, and the broader stakeholder community to ensure that GHG reduction requirements are met.

22.2 Outreach and Education

Outreach and education to empower every New Yorker to take part in the transition to a clean economy are essential elements to ensure successful implementation of the Climate Act and the strategies described in this Scoping Plan. Throughout this Scoping Plan there is the acknowledgement of the need for outreach and education, from increased outreach to farmers about nutrient management in the agricultural sector to engaging the public through marketing campaigns about the transition to energy-efficient and zero-emission buildings. There is also a recognition of the need for P-12 curricula to include climate change education. The scale of change outlined in this Plan requires a coordinated effort on outreach and education across all sectors of the economy. There are efficiencies of cost and time to be gained by developing a comprehensive outreach and education campaign rather than conducting this outreach by sector or by programs. Avenues to accomplish this include public education campaigns, targeted outreach to current or potential regulated entities, engagement with researchers and innovators, and general engagement and outreach to the key stakeholders that will be involved in the implementation of the various strategies. Recommendations presented in this Plan related to outreach and education include commonalities across sectors such as developing new curricula in P-12 schools as well as higher education and ensuring coordination between the State and local governments when engaging residents about climate action.

22.3 Workforce and Economic Development

As the State advances new economic development initiatives, as well as implements the policies and programs designed to achieve the Scoping Plan's goals, another essential element to the success of this

³³⁹ Information regarding the New York SmartGrid Consortium can be accessed at <http://nyssmartgrid.com/>.

Scoping Plan is workforce development across all sectors of the economy. Several recommendations to meaningfully address workforce needs are presented in *Chapter 7. Just Transition*, as well as information related to the job creation opportunity that is associated with the scale of the transition required to meet the Climate Act directives. The chapter discusses the mechanisms that the State uses and should continue to use or expand upon to develop a skilled workforce that will be able to implement the emissions-reducing strategies included in this Plan, including in the electricity, industry, buildings, transportation, agricultural, forestry, and waste sectors, but also to take advantage of new economic activity that results from attracting new clean-tech industries to New York.

The strategies and principles detailed by the Just Transition Working Group (JTWG) can be applied to these sectors to ensure a just and equitable transition across the whole economy and will generate numerous opportunities for New York's existing and emerging workforce.

Equal to the emissions and equity outcomes that are guiding this Scoping Plan, economic development is an equivalent goal for New York in the transition to a clean energy economy. The clean energy transition both in New York and nationally provides the opportunity for New York manufacturers to develop new products and expand their clients, and it also offers the opportunity for new manufacturers to develop a base in New York for ready access to the State's and the region's large building, transportation, and energy sectors. This requires strategic planning and coordination in the short-term in order to focus development in regions of the State where this could have the greatest impact, particularly in legacy/rust belt cities and Disadvantaged Communities.

Building on the business attraction efforts already underway by Empire State Development (ESD), which have resulted in significant economic development in offshore wind, energy storage, and clean transportation, a clean-tech-focused economic development plan should identify specific businesses and technologies that could benefit, in part through incentives for private investment, from the work New York is undertaking to meet the requirements of the Climate Act. It should also include an enhanced marketing strategy to attract these manufacturing and clean-tech businesses to New York, with a specific focus on in legacy/rust belt cities and Disadvantaged Communities. Market assessment, new business development, and entrepreneurship relating to minority-owned businesses should be prioritized along with support to develop these enterprises. This goes hand-in-hand with the pillar of achieving a just transition through promoting good, family-sustaining, union jobs accessible to all New Yorkers. It is important to ensure a coordinated effort at the state level in order to achieve the greatest results.