

Final Scoping Plan

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**Climate Action
Council**

Climate Leadership and Community Protection Act (CLCPA) – Overview

Carbon neutral economy, mandating at least an 85% reduction in emissions below 1990 levels by 2050

40% reduction in emissions by 2030

100% zero-emissions electricity by 2040

70% renewable electricity by 2030

9,000 MW of offshore wind by 2035

6,000 MW of distributed solar by 2025

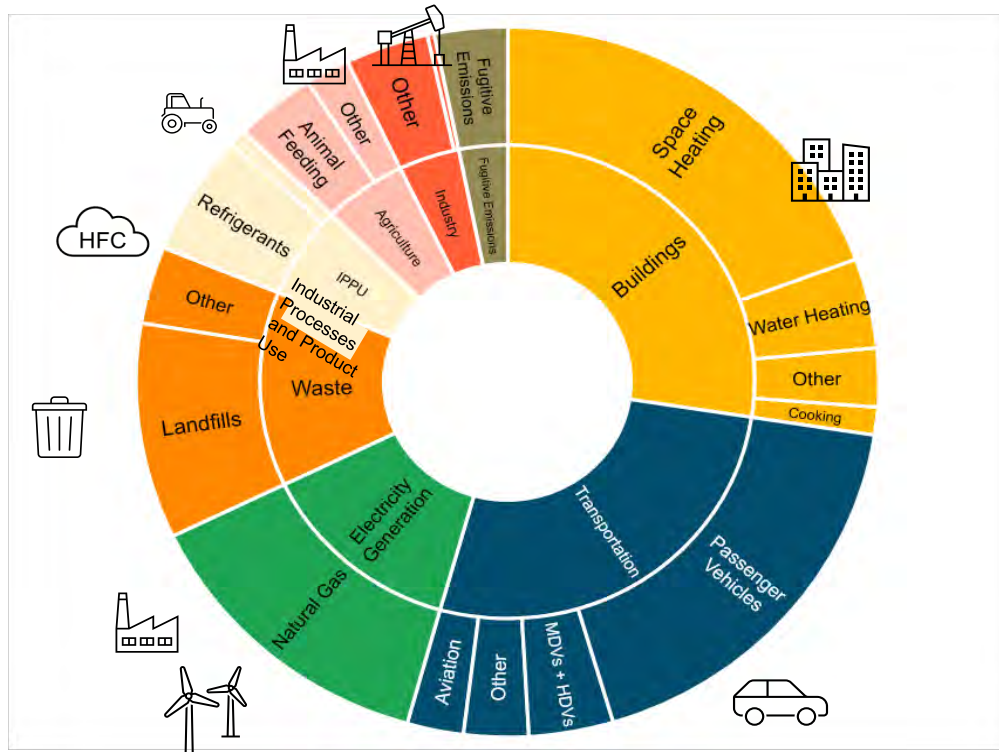
3,000 MW of energy storage by 2030

185 TBtu on-site energy savings by 2025

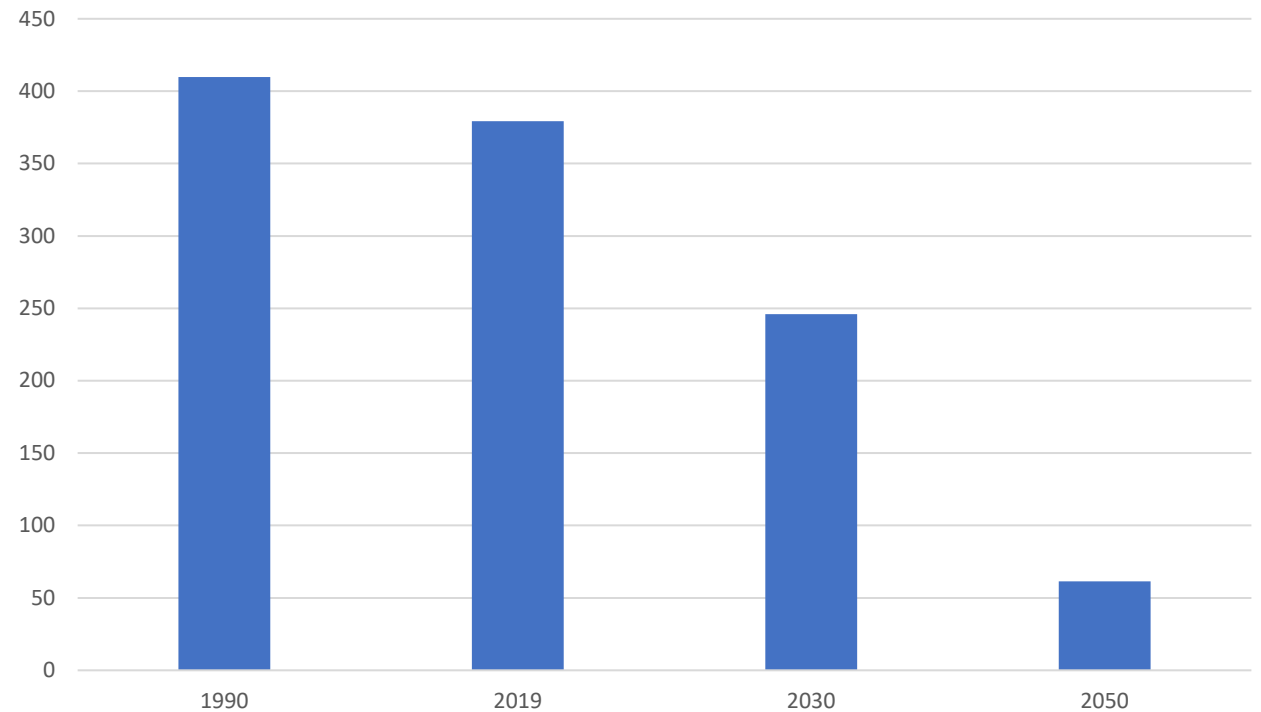
Commitments to climate justice and just transition

GHG Emissions Reduction Requirements

Current Estimated GHG Emissions by Sector



New York State GHG Emissions (MMtCO₂e)



Development of the Scoping Plan

The Climate Act required issuance of a Scoping Plan by the end of 2022 to meet statutory emission limits

- > The Scoping Plan is the result of three years of diligent and inclusive work and builds upon recommendations from seven sector-specific Advisory Panels, the Just Transition Working Group, and the Climate Justice Working Group
- > Informed by a six-month public comment period on the Draft Scoping Plan, including 11 public hearings across the State and more than 35,000 written comments
- > Prioritizes climate justice, job creation, cost reductions, public health benefits, and minimizing emission leakage
- > Undertakes comprehensive cost-benefit analysis to show impact of interaction of strategies across sectors
- > Provides recommendations for both sector-specific and cross-sector actions to achieve the Climate Act's goals and requirements

Key Findings from Integration Analysis

- > **Achieving deep decarbonization is feasible by 2050:** Achieving the GHG emission limits requires action in all sectors, especially considering the Climate Act's GHG emissions accounting. Every sector will see significant transformation over the next decade and beyond, which will require critical investments in New York's economy.
- > **Energy efficiency and end-use electrification are essential parts of any pathway that achieves New York State emission limits:** Approximately one to two million efficient homes must be electrified with heat pumps by 2030. Approximately three million zero-emission vehicles (predominantly battery electric) will be needed by 2030.
- > **The cost of inaction exceeds the cost of action by more than \$115 billion:** Achieving Climate Act GHG emission limits will require significant investment accompanied by even greater benefits. The GHG emission reduction strategies result in improvements in air quality, increased active transportation, and energy efficiency interventions in low- and moderate-income (LMI) homes, which generate health benefits. Reducing GHG emissions also avoids the economic impacts of societal damages caused by climate change.
- > **Create hundreds of thousands of jobs:** In addition to health and avoided economic damage benefits, new jobs driven by Climate Act investments are estimated to outnumber potential displaced jobs by a ratio of ten-to-one in 2030, with as many as 211,000 jobs expected to be created in growing sub-sectors by 2030 and 318,000 by 2040.
- > **Net direct costs are small relative to the size of New York's economy:** Net direct costs are estimated to be up to 0.6% of New York State's economy in 2030 and 1.3% in 2050. The passage of the federal Inflation Reduction Act is a major policy development that will likely reduce the costs of decarbonization economywide.

Real Benefits for New Yorkers

- > **Stronger and More Resilient Energy Systems:** Energy infrastructure will be strengthened and enhanced to be better prepared for and withstand, adapt, and quickly recover from disruptions such as severe weather and natural and man-made disasters.
- > **Clean, Affordable, Reliable Transportation:** EVs cost less to fuel, operate, and maintain, which will save individuals and families money. The upfront purchase price for EVs is approaching that of gasoline vehicles and continues to decrease. Zero-emission trucks and buses and expanded low-cost clean transportation options like biking, walking, and transit will enable New Yorkers to trade gridlock and diesel fumes for fresh air and cleaner communities.
- > **Clean and Safe Energy-Efficient Homes and Businesses:** Modern clean heating and cooling technologies, such as electric heat pumps and smart thermostats, combined with energy efficiency, will improve comfort and save New Yorkers energy costs.
- > **Clean and Reliable Electric Power:** Solar, wind, hydroelectric, and other zero-emission resources, combined with energy storage, will deliver safe and reliable electricity over the next decade and beyond, which will put an end to New Yorkers' vulnerability to fossil fuel disruptions and energy price volatility.
- > **Better Energy Choices:** When gasoline vehicles and fossil fuel heating or cooking appliances need replacement, State and federal incentives will help New Yorkers choose more efficient and higher-performing electric appliances and vehicles. Consumers may choose modern technologies that can save money and reduce emissions.
- > **High-Quality Jobs:** New York's energy transition will create tens of thousands of jobs, spur good quality union job employment, and drive job and wage gains across the economy and in every corner of the State.
- > **Better Health:** New Yorkers will benefit from positive health outcomes as a direct result of reduced fossil fuel emissions in communities and homes.
- > **An Equitable Clean Energy Economy for Everyone:** Every community, every trade, and every region will have access to clean energy solutions and the economic opportunities that the transition to a just and equitable energy system will provide.

Climate Justice in the Scoping Plan

The Climate Act requires that at least 35% with a goal of 40% of the benefits of New York's spending on clean energy are directed to Disadvantaged Communities

- > Disadvantaged Communities are areas burdened by cumulative environmental pollution and other hazards that can lead to negative public health effects and areas vulnerable to the impacts of climate change.
- > The Climate Justice Working Group released draft criteria for identifying disadvantaged communities in March 2022 using 45 indicators of environmental exposures, burdens, climate change risks, and sociodemographic factors such as age, race, and income. Following a robust public comment period, the CJWG finalized the criteria in March 2023.
- > Disadvantaged communities were identified based on geographic, public health, environmental hazard, and socioeconomic criteria. The Disadvantaged Communities criteria will be used for four statutory purposes:
 - > Co-pollutant reductions;
 - > Greenhouse gas emissions reductions;
 - > Regulatory impact statements; and
 - > Allocation of clean energy and energy efficiency investments

Just Transition in the Scoping Plan

A fundamental objective of New York's climate agenda is to ensure new economic development opportunities across the state and a just and equitable transition for New York's existing and emerging workforce

- > The implementation of the Climate Act will result in the addition of 200,000 new jobs by 2030, and tens of thousands more jobs created through 2050. New York also stands to see ten jobs added in growing clean energy sectors for every job potentially lost in displaced subsectors.
- > At the heart of this transformational movement will be union labor. The jobs being created are good paying and family-sustaining. We recognize our partners in labor are the backbone to the state's thriving clean energy economy.
- > New York will undertake a comprehensive strategy to ensure that its clean energy transition is a just transition
 - > Provide direct displaced worker support
 - > Ensure application of labor standards
 - > Target financial support for businesses
 - > Create new and comprehensive training curricula and programs
 - > Expand comprehensive career pathway programs
 - > Leverage community engagement, stakeholder input, and market assessments
 - > Create a new Office of Just Transition to centralize and direct state planning for a smooth, equitable transition for workers

Sector and Cross-Sector Strategies

The Scoping Plan includes strategies for all sectors of the economy

> Sector Strategies

- > [Transportation](#)
- > [Buildings](#)
- > [Electricity](#)
- > [Industry](#)
- > [Agriculture & Forestry](#)
- > [Waste](#)

> Cross-Sector Strategies

- > [Economywide Strategies](#)
- > [Gas System Transition](#)
- > [Land Use](#)
- > [Local Government](#)
- > [Adaptation & Resilience](#)

Next Steps

Finalization of the Scoping Plan initiates the next phase of work to realize the Climate Act's outcomes

- > DEC has until January 1, 2024, to draft and promulgate enforceable regulations to ensure the State meets the Climate Act's statewide GHG emission limits as outlined in the Scoping Plan.
- > An updated State Energy Plan will incorporate Scoping Plan recommendations.
- > Every four years, DEC will publish a report on the implementation of GHG emissions reduction measures, in consultation with the CAC and CJWG.
- > Every five years, the CAC will update the Scoping Plan as part of the ongoing process to meet the Climate Act targets and GHG emissions reduction limits.
- > By July 1, 2024, and every two years thereafter, the PSC will issue a comprehensive review of the renewable energy program, including progress in meeting the overall targets for 70% renewable electricity by 2030 and 100% zero-emission electricity by 2040.
- > Many Scoping Plan strategies also require action on the part of the State Legislature and support for local government actions.



Climate Act

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Our Roadmap for Cleaner Air and Communities

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Appendix

Sector Strategies

Transportation

By 2030 nearly all new light-duty vehicle sales and almost half of new medium- and heavy-duty vehicle sales will be zero-emission, and a substantial portion of personal transportation in urbanized areas will shift to public transportation.

By 2050 nearly all vehicles in New York State will have zero tailpipe emissions, and New Yorkers will have substantially greater access to low-carbon modes of transportation including public transportation.

Achieving the 2050 vision in the transportation sector will require a mix of regulatory action and investments. Four themes encompass the recommended strategies in the transportation sector:

- > Transition to Zero-Emission Vehicles and Equipment
- > Enhance Public Transportation and Mobility Alternatives
- > Promote Smart Growth and Mobility-Oriented Development
- > Facilitate Market-Based Solutions and Financing

Buildings

By 2030 the majority of new purchases for space and water heating will be heat pumps, with one to two million homes and 10% to 20% of commercial space using them by 2030, and hundreds of thousands of additional homes and commercial buildings becoming efficiently electrified each year.

The 2050 vision for the buildings sector sees 85% of homes and commercial building space statewide electrified with a diverse mix of energy-efficient heat pump technologies and thermal energy networks.

Four themes encompass the recommended strategies in this sector:

- > Adopt Zero-Emission Codes and Standards and Require Energy Benchmarking for Buildings
- > Scale Up Public Financial Incentives and Expand Access to Public and Private Low-Cost Financing for Building Decarbonization
- > Expand New York's Commitment to Market Development, Innovation, and Leading by Example in State Projects
- > Transition from Hydrofluorocarbons

Electricity

The Climate Act requires that 70% of statewide electricity come from renewable energy sources by 2030 (70x30) and that the State achieve a zero-emission electricity system by 2040 (100x40).

It also requires that the State install:

6,000 megawatts (MW) of distributed solar by 2025

3,000 MW of energy storage by 2030

9,000 MW of offshore wind by 2035

The Scoping Plan anticipates annual electricity demand will more than double by 2050, depending on the scale and timing of electrification and whether there are other clean alternatives for the transportation and building sectors. Three themes encompass the recommended strategies in this sector to be implemented through the State's Renewable Energy Program and other planning processes detailed in this Scoping Plan and as required by the Climate Act.

- > Transform Power Generation
- > Enhance the Grid
- > Invest in New Technology

Industry

Strategies for the State's industry sector are intended to mitigate the direct GHG emissions attributable to certain industrial activities such as manufacturing, mining and quarrying, and other energy- and emission-intensive industries.

These strategies are primarily incentive-based because non-incentive-oriented approaches are likely to cause leakage, where businesses leave or avoid the State and locate in other jurisdictions where they can emit higher levels of GHG emissions than they would have, had they remained in the State. Strategies designed to prevent emissions leakage also reflect the importance of protecting existing workers employed at such businesses and facilities.

- > Provide Financial and Technical Assistance
- > Incentivize Procurement for Low-Carbon Products
- > Support Workforce Development
- > Facilitate Research, Development, and Demonstration
- > Establish GHG Emissions Registry and Reporting System

Agriculture & Forestry

Agriculture and forestry encompass several economic sectors including livestock, crops, dairy, timber, wood products, and bioeconomy products.

Strategies to achieve the Climate Act's requirements and goals include mitigation of agricultural GHG emissions, primarily methane and nitrous oxide, as well as carbon capture (or sequestration), primarily through the growth of trees and other plants. Maximizing the carbon sequestration and storage potential in the agriculture and forestry sectors is a key strategy for achieving net-zero emissions across all sectors of the economy by 2050. Four themes encompass the recommended strategies in the agriculture and forestry sectors.

- > Promote Sustainable Forest Management
- > Advance Livestock Management Strategies
- > Improve Soil Health, Nutrient Management, and Agroforestry
- > Promote a Climate-Focused Bioeconomy

Waste

The waste management sector includes all aspects of materials management and wastewater treatment. Materials management includes waste reduction, reuse, recycling (including organics recycling), combustion, and landfilling.

Significant opportunities exist to reduce or avoid GHG emissions by improving both materials and materials management practices. Three themes encompass the recommended strategies in the waste sector.

- > Reduce, Reuse, and Recycle Waste
- > Monitor, Detect, and Reduce Fugitive Emissions
- > Establish Markets for Recovered Resources and Biogas Utilization

Cross-Sector Strategies

Land Use

Whether for development, conservation, or a mix of uses, land use directly affects the State's carbon emissions, sequestration, and storage and impacts the achievement of Climate Act requirements and goals.

Deciding where to conserve land, where to develop, and how to arrange and design that development are critical first steps in addressing climate change through land use strategies. Three themes encompass the recommended strategies in the land use sector.

- > Protect, Restore, and Monitor Natural and Working Lands
- > Consider Forests and Farmland in Land Use Policies
- > Promote Smart Growth

Local Government

Municipalities and other local government entities have an important role to play in meeting the Climate Act's requirements and goals. These entities are well positioned to have a far-reaching impact on community action because of their authority to enact codes and regulate land use and their leadership at the local level.

State programs that partner with communities and local governments are already contributing to the move toward a more energy-efficient future. This Scoping Plan recommends strategies to build on this momentum and respond to input provided by local leaders.

- > Establish Statewide Dashboard of Community GHG Emissions Inventories
- > Develop Local Energy Policies
- > Provide Clean Energy Siting Support
- > Promote Municipal Leadership to Support Clean Energy Adoption
- > Provide State Support and Local Guidance

Adaptation & Resilience

The Scoping Plan recognizes that climate change mitigation strategies alone are not sufficient to prepare for the effects of present and future climate change, the impacts of which are already being realized and are projected to accelerate.

The Scoping Plan recommends strategies within three themes to take action to adapt to climate change and enhance resilience in communities, infrastructure, and living systems.

- > Build Capacity
- > Enhance Community and Infrastructure Resilience
- > Enhance Resilience of Living Systems

Economywide Cap-and-Invest Program

- > As recommended in the Scoping Plan and at the direction of Governor Hochul, DEC and NYSERDA will advance an economywide Cap-and-Invest Program that establishes a declining cap on greenhouse gas emissions, limits potential costs to economically vulnerable New Yorkers, invests proceeds in programs that drive emission reductions in an equitable manner, and maintains the competitiveness of New York industries.
- > **How does cap-and-invest work?**
 - Over the coming year, DEC and NYSERDA will design a program that sets an annual cap on the amount of pollution that is permitted to be emitted in New York. Every year, the pollution cap will be set lower to meet our greenhouse gas emission reduction requirements.
 - Large-scale greenhouse gas emitters and distributors of heating and transportation fuels will be required to purchase allowances for the emissions associated with their activities. The Cap-and-Invest Program will incentivize consumers, businesses, and other entities to transition to lower-carbon alternatives. Proceeds will support the State's critical investments in climate mitigation, energy efficiency, clean transportation, and other projects, in addition to funding an annual Climate Action Fund that will be distributed to New Yorkers to help mitigate any potential consumer costs associated with the program.
- > **Governor Hochul's guiding principles:**
 - Affordability | Climate Leadership | Creating Jobs and Preserving Competitiveness | Investing in Disadvantaged Communities | Funding a Sustainable Future

Gas System Transition

- > Achieving the Climate Act's emission limits will require a substantial reduction of fossil natural gas use and a strategic downsizing of the gas system.
- > A well-planned and strategic transition of the gas system will require coordination across numerous sectors to integrate planning with the decarbonization of the power generation sector and the build-out of local electric transmission and distribution systems to meet anticipated increases in electric demand throughout the state.
- > The Scoping Plan includes a detailed framework through which agencies can develop a coordinated gas system transition plan.
- > The framework provides strategies and guidance to ensure the transition plan sets a clear timeline for the transition while satisfying key principles such as GHG and co-pollutant emission reductions, equity considerations, workforce protections, affordability, safety and reliability, decision-making informed by independent analysis, coordination with electric system expansion, and consumer engagement.