

# Climate Change & GHG Emissions

Adaptation to and mitigation of climate change impacts and risks, and the capitalization of associated business opportunities, as well as NYPA's Scope 1 (direct), Scope 2 (energy indirect) and Scope 3 (other indirect) greenhouse gas emissions

Addressing climate change and reducing greenhouse gas (GHG) emissions is a core focus area for NYPA and Canals.

To advance and achieve our decarbonization targets, we intend to:

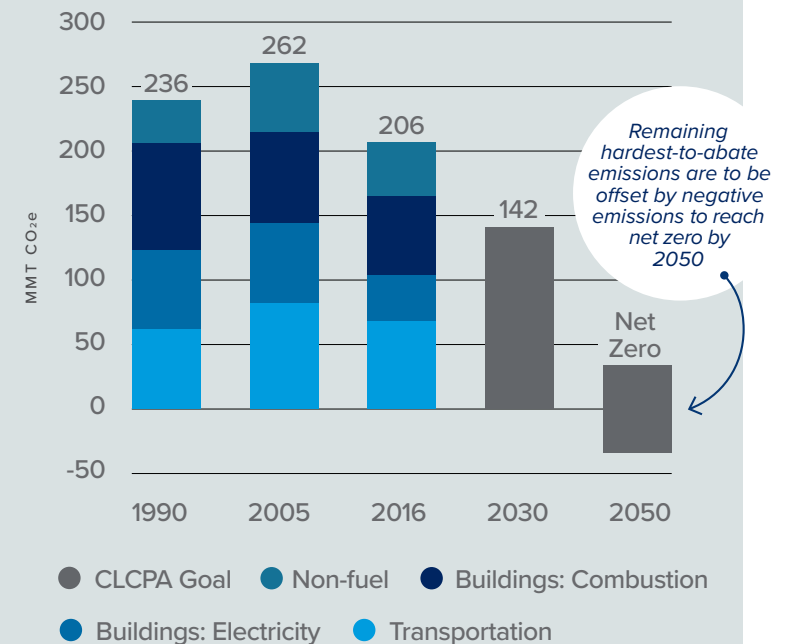
- > Preserve and enhance the value of hydropower assets
- > Decarbonize generation assets by 2035
- > Expand the high voltage transmission system
- > Increase the procurement of renewable energy
- > Invest in customer-centric decarbonization opportunities that include energy efficiency, distributed solar generation, customer-sited storage and electrified transport

- > Increase the energy-efficiency and electrification of our buildings, facilities and vehicle fleet, as well as onsite distributed energy resources
- > Assess the physical impacts of climate change on system operations
- > Enhance our performance management and reporting by developing a comprehensive GHG inventory, integrating disclosures aligned with the TCFD in our annual Sustainability Report and voluntarily reporting annual GHG emissions to TCR

NYPA's climate change commitments, as described in VISION2030, are in alignment with the cross-sector decarbonization pathways outlined in the IPCC's *Special Report on Global Warming of 1.5°C*, the CLCPA and other New York State initiatives—setting some of the most ambitious energy and GHG reduction goals in the U.S.

## CLCPA GOALS ARE AMBITIOUS AND NYPA WILL PLAY A KEY ROLE IN ACHIEVING THEM

New York State Emissions: 40% GHG reduction by 2030; 85% by 2050



VISION2030 sets NYPA on a path to support the CLCPA's goal of achieving a net zero carbon economy by 2050 by supporting renewable energy and electrification, energy storage, transmission and other efforts, including exploration of natural carbon sequestration opportunities.

Chart Source: New York State Energy Research and Development Authority's (NYSERDA) *Pathways to Deep Decarbonization in New York State Report*

## OVERVIEW OF GHG SCOPES AND EMISSIONS

CO<sub>2</sub>

CH<sub>4</sub>


N<sub>2</sub>O

HFCs

PFCs


SF<sub>6</sub>

NF<sub>3</sub>




**SCOPE 1  
DIRECT**

- > Stationary combustion of fuels (power plants, facilities)
- > Mobile combustion (fleet vehicles, corporate aircraft)
- > Fugitive emissions (sulfur hexafluoride (SF<sub>6</sub>) associated with electrical equipment)



**SCOPE 2  
ENERGY INDIRECT**

- > Consumption of purchased electricity, heat or steam
- > Transmission line losses



**SCOPE 3  
OTHER INDIRECT**

- > Employee commuting
- > Employee business travel
- > Emissions associated with electricity sales (contracted and wholesale market purchases)

### GOAL 1

Manage Scope 1, 2 and 3 emissions and implement GHG reduction strategies

### STRATEGIES

- > Use natural gas plants as a test-bed for innovation and new low-to-zero carbon technologies
- > Expand and upgrade transmission
- > Plan to procure renewable energy
- > Provide clean energy products and services to our customers
- > Implement building and fleet energy efficiency and electrification programs
- > Install renewable energy at our facilities
- > Identify and implement ecosystem-based mitigation strategies
- > Conduct stakeholder engagements to accelerate the adoption of clean technologies

INITIATIVE SPOTLIGHTS

# NYPA CLIMATE ADAPTATION AND RESILIENCE ASSESSMENT

NYPA has developed a plan to assess climate risks and impacts, the outcomes of which will be used to inform the development of climate change adaptation and resilience strategies.

**PHASE I: ASSESS PHYSICAL IMPACTS OF CLIMATE CHANGE ON NYPA'S ASSETS AND OPERATIONS (2021-2022)**

NYPA will assess the projected impact of climate change on physical assets, system operations and capital improvement planning, with the goal of increasing organizational resilience by minimizing service disruptions and ensuring that capital expenditures are aligned to NYPA's risk posture.

**PHASE II: ASSESS SOCIAL AND ECONOMIC IMPACTS OF CLIMATE CHANGE ON NYPA'S STAKEHOLDERS (2023-2024)**

Building on the physical impact assessment, NYPA will evaluate the social and economic impacts of climate change on customers, communities and other stakeholders, and identify strategies to support regional and community adaptation and resilience planning efforts.

## REIMAGINE THE CANALS AND CLIMATE RESILIENCE

Through its focus on building resilient communities and resilient infrastructure, NYPA's *Reimagine the Canals* program will harness the potential of the Canal system to reduce the impacts of extreme and unpredictable weather.

Key resilience projects include:

- > **Western Water Management and Irrigation:** a program that will utilize existing infrastructure and Erie Canal water in Western New York to enhance agricultural irrigation, enabling farmers to invest in high-value crops.
- > **Ice Jam Mitigation:** a suite of projects that will mitigate the effects of ice jams to reduce flooding, while improving forecasting and early-warning systems.

**GOAL 2**

**Conduct climate impact study and identify resilience strategies**

**STRATEGIES**

- > Conduct assessment of the physical impacts of climate change
- > Conduct assessment of the social and economic impacts of climate change on NYPA stakeholders
- > Implement climate resilience initiatives identified as part of *Reimagine the Canals*

**SEE ALSO**

- > *Renewable Energy & Energy Storage*
- > *Energy Reliability*
- > *Energy Efficiency & Electrification*
- > *Environmental Stewardship*
- > *Community Engagement*
- > *Access & Affordability*
- > *Economic Development*