

2007 Report to NYS Conservation Council from Office of Climate Change

A newly established office in DEC will play a key role in carrying out the state's program to reduce climate-changing emissions, and to adapt where warming is unavoidable.

Goal: Develop and implement initiatives to accelerate the protection of air, land and water quality.

Objective: Minimize creation of waste and pollutants.

Most scientists today agree that the earth's temperature is growing warmer, that this warming is most likely caused by burning fossil fuels, and that the climate changes from the increased temperatures threaten our resources and our way of life.

In the Northeastern United States, scientists have documented a rise in the average annual temperature of 1.8 degrees Fahrenheit over the past century, with average winter temperatures up as much as 4.4 degrees in the past 30 years.

Much of the Northeast has already seen a change in the winter season, with Adirondack snowfall down by 40 to 60 inches per year and an average of 20 fewer days with snow on the ground in some parts of the state. Lake Champlain now freezes over, on average, 11 days later than in the early 1800s, and also thaws earlier in the spring. Later ice-in dates appear to be feeding more intense "lake effect" winter storms in the Great Lakes region.

Growing seasons are lengthening, as shown by the earlier bloom dates of many common plants. More of the summer is expected to be hot and dry, with periodic heavy rainfalls. An increase in hurricanes and other strong storms fed by rising ocean temperatures also is expected.

These changes are likely to affect the types of species that survive in New York. In particular, New York's fisheries may undergo significant change. Our traditional mix of cold and warm/temperate marine species, as well as populations of coldwater species like trout and salmon in our fresh waters, could be at risk as waters grow warmer.

Significant change in our climate also threatens New Yorkers' economy and lifestyle. For this reason, Governor Eliot Spitzer has assigned urgent priority to understanding and mitigating global climate change, as well as to taking actions needed to accommodate warming that cannot be avoided. He has set an ambitious 2015 goal of reducing electricity use by 15 percent through improved efficiency, along with greater use of clean and renewable energy sources.

Other elements of the Governor's program include:

- Promoting the development of renewable energy sources through the Lieutenant Governor's State Task Force on Renewable Energy and the state Renewable Portfolio Standard.
- Using the market to reduce carbon dioxide emissions from power plants through the cap-and-trade program developed by the Regional Greenhouse Gas Initiative (RGGI). RGGI aims to cap emissions at 2009 levels, then reduce them by 10

percent in the next decade. Currently, the ten northeastern states participating in RGGI states expected to have regulations in place by the startup date of January 1, 2009. RGGI, Inc., a nonprofit corporation, will provide technical support and guidance as states make rules and implement a cohesive regional program.

- Adopting California's strict vehicle emission standards to reduce passenger vehicle emissions of greenhouse gases by 30 percent.
- Establishing in DEC the New York State Climate Change Office to help governments and institutions respond effectively to climate change, through reduced emissions and adaptations to unavoidable warming.

Goal: Combat Climate Change

Office of Climate Change

The New York State Office of Climate Change was created to lead the development, in concert with other DEC programs and New York State agencies, of programs and policies that mitigate greenhouse gas (GHG) emissions and help New York communities and individuals adapt when changes in our climate cannot be avoided.

The office has two Bureaus: Climate Science and Technology, and Climate Programs and Partnerships. The Climate Science and Technology Bureau uses sound science, engineering and economic principles to design solutions that will help stabilize atmospheric greenhouse gas concentrations at acceptable levels. The bureau also supports the development of climate impact analyses to help New York respond to the impacts of climate change. The Climate Programs and Partnerships Bureau works to inform, assist and empower state agencies, local governments, NGOs, institutions, businesses and individuals as they reduce carbon emissions and adapt to unavoidable impacts.

The Office aims to ensure that New York develops the full suite of responses needed for significant emission reductions and for successful adaptation to changing temperatures, sea levels, precipitation and other climate factors. These responses include:

- Mitigation programs to reduce GHG emissions
- Emissions inventory and assessment
- Evaluations of the feasibility and benefits of alternatives to fossil-fuel technology and of other mitigation and adaptation approaches
- Partnerships for shared solutions that save money for governments, institutions, businesses and individuals
- Information about expected climate change impacts, to help communities, organizations and individuals determine what local adaptations will be needed

Mitigation

Regional Greenhouse Gas Initiative (RGGI). New York's first mitigation program specifically focused on carbon dioxide (CO₂, the principal greenhouse gas) is already underway: the Regional Greenhouse Gas Initiative (RGGI), a ten-state program under

which power sector CO₂ emissions are reduced through cap and trade with allowances purchased in an auction. The Office of Climate Change is deeply involved in making this unprecedented program a reality - working on power plant CO₂ controls, reviewing applications for offsets, developing auctions for CO₂ allowances.

The first CO₂ allowance auction under RGGI is scheduled for September 24, 2008. The rules establishing New York's CO₂ Budget Trading Program have been approved by the New York State Environmental Board, and are expected to go into effect in December, 2008. New York will make CO₂ allowances available for the second RGGI auction, scheduled for December , 2008.

Stationary Sources. Traditional rulemaking is another important tool for mitigating GHG emissions. The Office is working on regulatory performance standards for new stationary sources that will have large, long-term CO₂ emissions, including electric power plants, very large boilers, and gasification systems.

Emissions Inventory

The outlines of the state's GHG emissions inventory are widely known: the bulk of these gases are generated in roughly equal parts by transportation, space heating/cooling for buildings, and electric power production. To cost-effectively mitigate GHG emissions, however, more detailed emissions assessments are needed.

The Climate Registry. The Office is promoting voluntary emissions reporting by New York facilities, through a national nonprofit group, The Climate Registry. New York serves on the Board of Directors of The Climate Registry, along with representatives from thirty-eight other US states, eight Canadian provinces, six Mexican states, three native tribes and the District of Columbia. The Climate Registry recently released its protocol for emissions reporting, which will provide accurate and consistent emissions inventory data to ensure that emissions reductions are equitably shared. DEC has committed to inventory and report its own emissions under The Climate Registry protocol. The Office of Climate Change is coordinating this reporting program.

Sea Level Rise

Because New York is a coastal state, preparing for the rise in sea levels that is predicted as a result of global warming is critical. The Office represents DEC on the New York State Sea Level Rise Task Force, which is charged with assessing impacts to the state's coastlines from rising seas, and recommending protective and adaptive measures. The task force held its first meeting on June 27, 2008; its report is due to the Legislature by December 31, 2009.

Energy Planning

The Office is working with other DEC divisions and other state agencies to develop the statewide Energy Plan directed by Governor David Paterson. The first draft of the plan is due in March, 2009.

Technology Assessment

Among technologies being evaluated are liquid and solid biofuels; reductions in vehicle miles traveled; and carbon capture and storage.

Partnerships

The Office of Climate Change aims to integrate a climate change element into the decision making and practices of governments, public and private institutions, businesses and individuals across the state. Through the Office of Climate Change, New York participated in the 2007 United Nations Climate Change Conference in Bali, and continues to work with the International Carbon Action Partnership, an organization of governments actively operating or developing cap and trade programs.

Information

Informing the public is a key challenge for the Climate Change program. The Office of Climate Change is part of a network of organizations working to provide the best available science, enabling New Yorkers to act effectively to protect themselves and their environment. Teachers and students at all levels are seeking information about climate change, which the Office is working to provide in partnership with DEC's Environmental Education Centers.

Adaptation

The Office is representing DEC on the New York City Climate Change Adaptation Task Force. Along with the state Department of Transportation and the NYS Power Authority, DEC will work with the City Government and the Metropolitan Transit Authority on adaptation measures appropriate for the City.