New York State's Ambitious Plans to Address Climate Change – The Climate Leadership and Community Protection Act and the Draft Scoping Plan – Open for Public Comment Now

by Kitty O'Neil, Zach Spangler and Jenna Walczak

New York State's Climate Leadership and Community Protection Act (CLCPA or Climate Act) was passed in 2019 and lays out a plan to progress NYS communities and businesses toward a carbon-neutral economy, with meaningful milestones along the way. Climate change presents real problems for our communities, lands, infrastructure and economy. We expect our steadily increasing release of greenhouse gasses (GHGs) – such as carbon dioxide, methane, and nitrous oxide – into the atmosphere to cause severe weather patterns such as intense storms, droughts, flooding events, and more frequent and intense heat waves. This will result in catastrophes like power grid outages, wastewater and contaminant spills, and all the downstream, long-term impacts of these disruptions and damages to our communities and systems. For NYS farms, climate change increases the likelihood of weather delays during planting and harvest seasons as well as heat stress for crops and animals. To begin to solve this problem, we need to rapidly reduce our release of GHGs. The CLCPA addresses this need head-on with a systematic approach.

Goals of the CLCPA include an 40% reduction in GHG emissions by 2030, and an 85% reduction by 2050, compared with 1990 emissions levels. To identify and enable action toward this end, the Act tasked a Climate Action Council with conducting a complete GHG inventory and with drafting a 'Scoping Plan' to outline a framework for how NYS will equitably reduce GHG emissions. The GHG inventory has been completed and summarizes all GHG emitted by human activity in NYS from 1990 to 2019 for four sectors – Energy, Industrial processes, Agriculture /Land Use, and Waste. A quick read of the inventory report reveals lots of complex decisions that were needed about how to value and assign these emissions and how to draw boundaries around the different sectors. Descriptions of how this was decided and calculated, however, are also detailed. Some GHG improvements have already begun. The inventory document reports that peak emissions in NYS occurred in 2005 and we've already reduced GHG emissions by 17% since then. Our primary GHGs of concern are CO_2 and methane and the sectors most responsible for our GHG emissions are the Energy, Waste and Agriculture sectors. The strategies outlined in the Scoping Plan reflect the relative scale of these various contributions by all sectors in its priorities.

The Energy sector includes all emissions associated with the generation and use of energy, including for electricity generation, transportation, and on-site fuel use in buildings for heat or manufacturing. The Energy sector encompassed the largest portion of emissions every year included in the inventory and therefore a big part of the GHG reduction strategy in the Scoping Plan is focused on this sector, aimed at achieving 100% reduction in emissions from electricity generation by 2040. Implementation of some of these strategies is already visible around us, in the form of wind and solar power generation installations, a shift toward more efficient equipment and systems and more electric-powered buildings and transportation. The Scoping Plan outlines a strategy to generate more renewable energy, retire fossil fuel-powered electricity generation and improve our distribution infrastructure.

Emissions resulting from the Waste sector are largely methane and CO2, generated by the decomposition and combustion of human-generated waste materials. Sources of GHG from this sector are landfills, waste incineration facilities, recycling operations, wastewater systems and anaerobic digesters. The largest contribution to GHG emissions from waste management is the uncaptured methane emitted from landfills. As Composting and natural organic matter decomposition are not included in this inventory.

The Scoping Plan defines the Agriculture sector as production of livestock, crops, dairy, timber and wood products and its emission sources include equipment, animals, cropland, forest fires, decomposition of dead trees and development of ag and forest land. This sector also provides carbon sequestration benefits, with its ability to

remove atmospheric CO_2 and store it in trees, plants and soil. The strategies outlined in the Scoping Plan for the Ag sector are focused on both sides of this equation – mainly reducing methane and nitrous oxide emissions and sequestering more carbon. The Scoping Plan outlines the use of the Agricultural Environmental Management (AEM) program to provide assistance and planning for the Ag sector. Many Ag sector strategies are focused on forest management, but there are also emphases on precision feed management, manure management, nutrient management, soil health and a payment-for-ecosystem-services program. Livestock emit the dominant share of agricultural GHG as methane and nitrous oxide. Methane emissions from manure storages are targeted for investment in the form of cover-and-flare systems, anaerobic digesters, composting systems and other methods that collect, capture and destroy methane or prevent its production. The statewide Climate Resilient Farming grant program has already provided $12 million in funding for some of these efforts through local county Soil and Water Conservation District (SWCD) offices with another $8 million available this year. Methane emitted from normal ruminant digestion, or enteric fermentation, is also addressed in the Scoping Plan. Though this GHG represents the largest share of agricultural emissions, methane production per unit of meat or milk has decreased from 1990 levels due to improved feed efficiencies. Further reductions in animal methane emissions are needed however, and may be achieved with more research, testing and use of feed additives. Some of these ideas are already in progress.

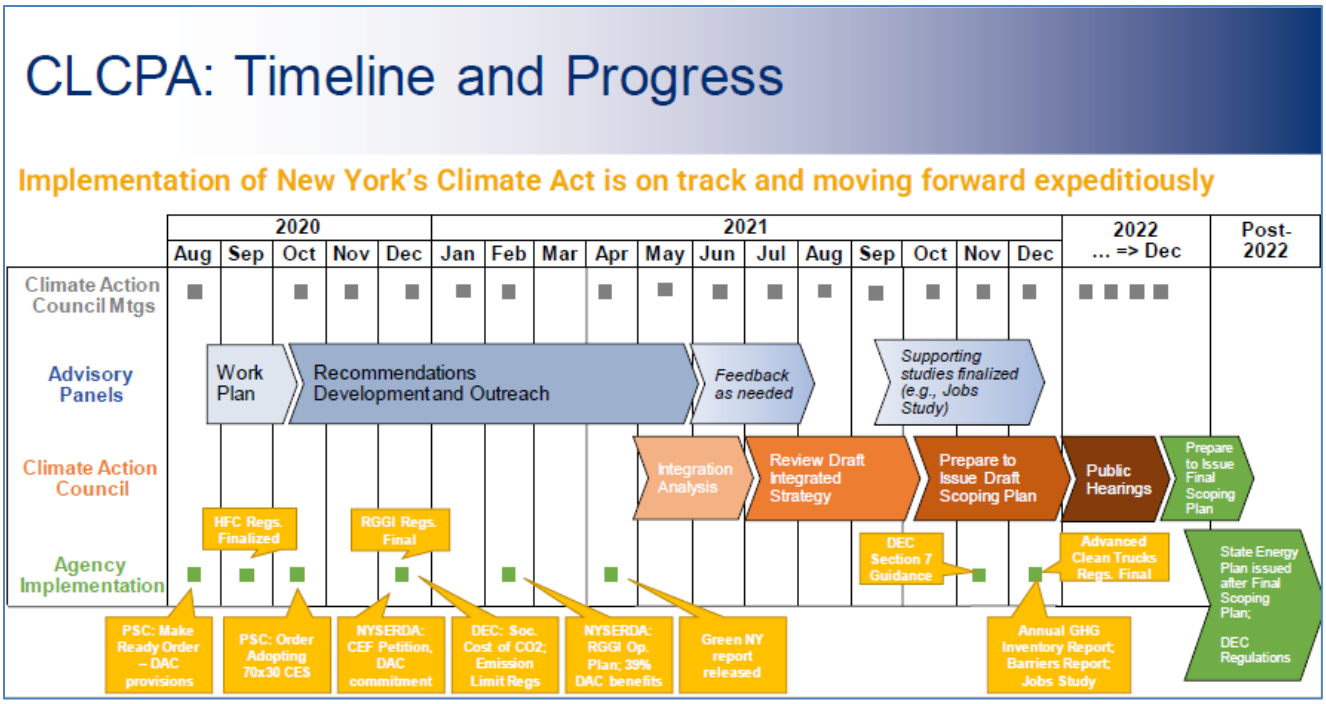
The other portion of Ag sector emissions is nitrous oxide, mostly emitted from nitrogen fertilizer losses to the atmosphere. Reducing this loss is already desirable and prioritized on almost all farms especially in this year of record high fertilizer prices, but it will also be a target of added urgency as part of GHG mitigation efforts. Soils also release CO_2 as organic matter is decomposed via natural processes. This release can be reduced, however, with elimination of tillage, and soil can even serve as a net sink of carbon with improved health practices, which also offers other resilience advantages to the farm.

Expansions of capacity and technology, training and cost-shares appear throughout this Draft Scoping Plan, in addition to the bits described here, as they apply to each sector. The Scoping Plan is 340 pages in length and includes detailed presentations of strategies, rationales and feedback plans for the six sectors of the economy included in the CLCPA – buildings, electricity, industry, ag and forest lands, and waste. Links are listed below to the Draft Scoping Plan, the GHG Inventory Report, the CLCPA website and other materials.

One crucial component of the CLCPA initiative is the public comment and input period, which is currently open through June 10, 2022. Eight in-person and 2 virtual public hearings are scheduled to collect feedback on the Draft Scoping Plan. Event dates and locations are listed here. The most convenient for the North Country is 4 pm on Tuesday May 10th at The Wild Center in Tupper Lake or the virtual sessions. Preregistration for these events is encouraged. Written comments are also invited, and they may be submitted via an online form here. The Scoping Plan is expected to be finalized and published in January 2023.

The progress and protection intended by the CLCPA and its specific strategies will offer both challenges and opportunities to NY farms and communities. Some transitions and changes may be simple while others may be more lengthy and difficult. Each component of the plan offers potential for innovation and collaboration across sectors, with benefits to farms, the environment, and our communities. Extension can provide technical support on many of the management practices and systems that will be needed, with our local SWCD offices providing much of the administration.

Cornell Cooperative Extension recently added two Climate Resilience Specialists to our statewide system – Jenna Walczak ((518) 791-1888 and JW2254@cornell.edu) and Zach Spangler ((518) 935-8062 and ZHS3@cornell.edu). Both are housed in the Hudson Valley and are developing statewide programs to advance resilience in our agricultural production systems across NYS. Watch for their contributions to this important topic.



Additional Resources:

1. NYS Climate Leadership and Community Protection Act (CLCPA) website https://climate.ny.gov/
2. NYS Greenhouse Gas Inventory Report website https://www.dec.ny.gov/energy/99223.html and report summary https://www.dec.ny.gov/docs/administration_pdf/ghgsumrpt21.pdf
3. NYS Climate Action Council Draft Scoping Plan https://climate.ny.gov/Our-Climate-Act/Draft-Scoping-Plan
4. NYS Economic Impacts of Investing in Climate Mitigation in New York Forests and Agriculture https://climate.ny.gov/-/media/Files/Publications/Energy-Analysis/Economic-Impacts-of-NYS-Climate-Mitigation-Strategies.pdf

For more information about field crop and soil management, contact your local Cornell Cooperative Extension office or your CCE Regional Field Crops and Soils Specialists, Mike Hunter and Kitty O'Neil.

Kitty O'Neil
CCE Canton Office
(315) 854-1218
kitty.oneil@cornell.edu

Mike Hunter
CCE Watertown Office
(315) 788-8450
meh27@cornell.edu

Our Mission

"The North Country Regional Ag Team aims to improve the productivity and viability of agricultural industries, people and communities in Jefferson, Lewis, St. Lawrence, Franklin, Clinton and Essex Counties by promoting productive, safe, economically and environmentally sustainable management practices and by providing assistance to industry, government, and other agencies in evaluating the impact of public policies affecting the industry."

Building Strong and Vibrant New York Communities