

New York State Climate Action Council

June 8, 2021
Meeting 11



**Climate Action
Council**

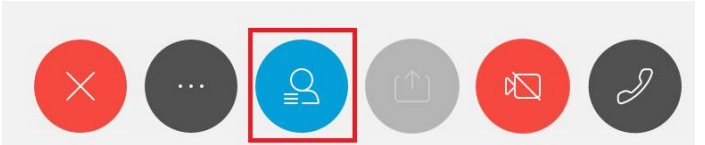
Meeting Procedures

Before beginning, a few reminders to ensure a smooth discussion:

- > CAC Members should be on mute if not speaking.
 - > If using phone for audio, please tap the phone mute button.
 - > If using computer for audio, please click the mute button on the computer screen (1st visual).
- > Video is encouraged for CAC members, in particular when speaking.
- > In the event of a question or comment, please use the hand raise function (2nd visual). You can find the hand raise button by clicking the participant panel button (3rd visual). The co-chairs will call on members individually, at which time please unmute.
- > If technical problems arise, please contact NYS.CAC@cadmusgroup.com.



You'll see  when your microphone is muted



Agenda

- > Welcome
- > Consideration of May 10, 2021 Minutes
- > Co-Chair Remarks and Reflections
- > Presentation and Discussion: Recommendations Local Government Advisory Panel
- > Next Steps

Consideration of May 10, 2021 Minutes

Recent Announcements

New Financing Pathway for Multifamily Affordable Housing Electrification Projects

- > NY Green Bank issued [RFP 18](#) on May 12, launching an expanded investment approach that focuses on projects prioritizing energy efficiency and electrification in housing found within disadvantaged communities across the State

Joint Governors' Letter to the Biden Administration on Prioritization of Offshore Wind

- > In June 4 [letter](#), nine states (CT, ME, MD, MA, NH, NJ, NY, RI, and VA) commit to collaborating on climate goals and utilizing their joint resources to maximize the economic potential of the offshore wind industry
- > Recommends five specific strategies to take advantage of growing industry: 1) set long-term targets for lease areas; 2) increase interstate coordination during project design and permitting processes; 3) set long-term targets for offshore wind ports; 4) ensure adequate transmission capacity; and 5) provide support for other marine industries and users

Energy to Lead Awards

- > Over \$5M for innovative campus projects driving emissions reductions, including multiple projects featuring buildings designed for net zero emissions performance
- > Four schools awarded funding: City College of New York Building Performance Lab, New York Medical College, Syracuse University, and Vassar College

Adaptation and Resilience Recommendations

Land Use and Local Government Advisory Panel

Adaptation and Resilience Recommendations

Sarah Crowell, LULGAP Chair
New York State Department of State

Mark Lowery, Adaptation and Resilience Group Leader
New York State Department of Environmental Conservation

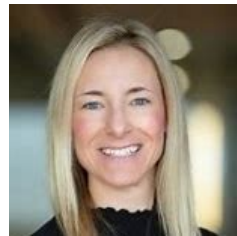


**Climate Action
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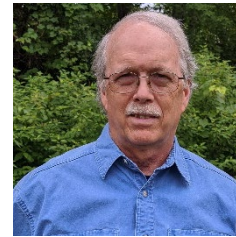
Land Use and Local Government Advisory Panel Members



Sarah Crowell, Chair
Director, Office of
Planning, Devt, &
Community
Infrastructure: DOS



**Jayme Breschard-
Thomann**
Senior Project
Manager:
Bergmann PC



Ed Marx
Former Commissioner
of Planning:
Tompkins County



Gita Nandan
Board Chair: RETI
(Resilience, Education,
Training and
Innovation) Center



Mark Lowery
Assistant Director,
Office of Climate
Change: DEC



Kevin Law
President & CEO:
Long Island
Association



Kathy Moser
Senior Vice
President:
Open Space
Institute



Juan Camilo Osorio
Assistant Professor:
Pratt Institute School
of Architecture



Jessica Bacher
Managing Director:
Pace University School
of Law Land Use
Law Center



Katie Malinowski
Executive Director:
NYS Tug Hill
Commission



Priya Mulgaonkar
Project Manager:
Hester Street
Collaborative



Eric Walker
Climate and Clean
Energy Strategist

Adaptation, Resilience and the CLCPA

- > Requires consideration of climate change in permit applications for major projects in all UPA permit programs
- > Authorizes DEC to require mitigation of significant climate risks to any natural resource, public infrastructure or services, disadvantaged communities, or private property not owned by the applicant
- > Authorizes Climate Action Council to include adaptation and resilience recommendations in scoping plan



Adaptation and Resilience Group

Membership

- > LULGAP members with interest in adaptation and resilience (all invited)
- > LULG Staff Working Group
- > Adaptation and resilience liaisons from each advisory panel

Scope

- > Hazard-specific adaptation and resilience recommendations
- > Recommendations to enhance community adaptation and resilience
- > Recommendations to enhance statewide adaptation and planning
- > Recommendations specific to recommended GHG mitigation strategies

Public and Stakeholder Input Process

- > Seven meetings of Adaptation and Resilience Group
- > Updates to LULGAP
- > Comments and feedback during eight LULGAP meetings, with presentations and meeting notes posted on climate.ny.gov
- > Ongoing review and updates by Adaptation and Resilience Group
- > Ongoing consultation with state agencies, advisory panel liaisons
- > Ongoing public comments through LULGAP@dos.ny.gov
- > Consultation with Interagency Climate Change Adaptation and Resilience Work Group (April 2)
- > Consultation with New York State Resilience Practitioners Network (April 6)
- > Local Government Officials Roundtable (March 8)
- > Public stakeholder comment session, recommendations posted (April 8)
- > Final LULGAP review (May 12)

New York's Climate Vulnerabilities

- Higher temperatures
- More precipitation
- More frequent drought
- Sea-level rise
- More extreme events:
 - Floods
 - Heat
 - Ice/snow
 - Winds
 - Coastal storms
- Disease and pests



- Risks to people
- Stressed infrastructure
- Agricultural and ecosystem effects



NYSDEC



PhillipC/flickr



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Conservation Value Notes



T.B. Ryder



Greenpeace International



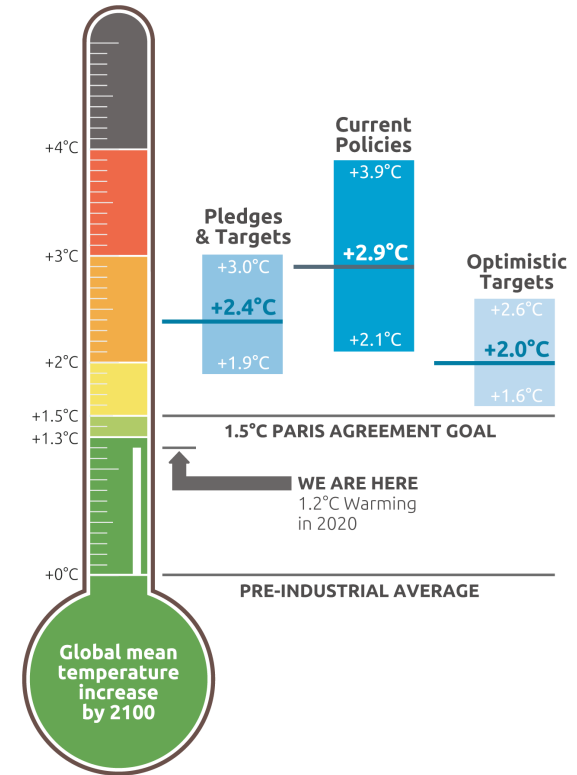
NYSDEC



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Significant Risk in Continuing GHG Emissions

- Economic damage attributable to climate change in the US will be in the 100s of billions of dollars per year by 2090 under a high emissions scenario (NCA4).
- Even 1.5°C will carry significant risks, and risks are substantially higher at 2°C warming. Allowing warming of 1.5C could trigger feedback loops with the potential to cause runaway warming.(IPCC)
- Current in-place policies would lead to a 2.1-3.9°C rise. (Climate Action Tracker)



CAT warming projections
Global temperature increase by 2100

May 2021 Update

Adaptation and Resilience Themes



- Building Capacity
- Communities and Infrastructure
- Living Systems

Building Capacity

- > Commit to creating, implementing and updating a comprehensive and equitable state climate change adaptation and resilience plan. (AR1)
- > Incorporate equitable adaptation and risk-reduction considerations into relevant state funding and regulatory programs, projects and policies. (AR2)
- > Strengthen meaningful community engagement and public education, and build adaptive capacity across all sectors. (AR3)
- > Identify and evaluate options for supporting equitable adaptation and resilience practices and projects, and to enhance insurance protection. (AR4)

AR1: Commit to creating, implementing and updating a comprehensive and equitable state climate change adaptation and resilience plan

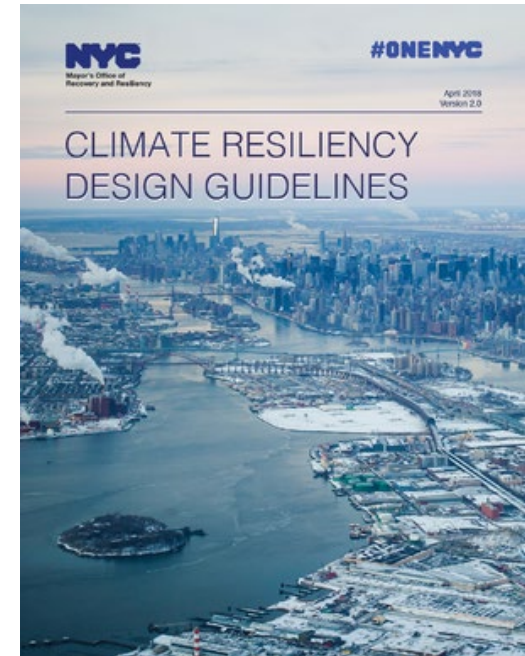
- > Appoint a state resilience officer
- > Convene an adaptation and resilience sub-cabinet
- > Develop and implement a comprehensive adaptation and resilience plan
- > Complete and implement agency and authority vulnerability assessments and plans
- > Identify and prioritize state adaptation and resilience projects
- > Conduct periodic, science-based integrated climate assessments and other research



NYSERDA's ClimAID report, published in 2011 and updated in 2014, has provided valuable climate change projections and information useful in assessing vulnerabilities across a variety of sectors. NYSERDA will soon begin the next integrated assessment of climate impacts.

AR2: Incorporate equitable adaptation and risk-reduction considerations into relevant state funding and regulatory programs, projects and policies (1 of 2)

- > Adopt, publicize and standardize the use of NYS-focused projections
- > Develop and adopt design resilience guidelines for state-funded projects
- > Promote integrated decision making for capital investments
- > Adopt guidance on the selection of metrics to evaluate equity and justice impacts
- > Implement strategies to increase and prioritize investment in disadvantaged communities



NYC's design guidelines direct project planners, engineers, etc. on use of climate projections in design of municipal facilities.

AR2: Incorporate equitable adaptation and risk-reduction considerations into relevant state funding and regulatory programs, projects and policies (2 of 2)

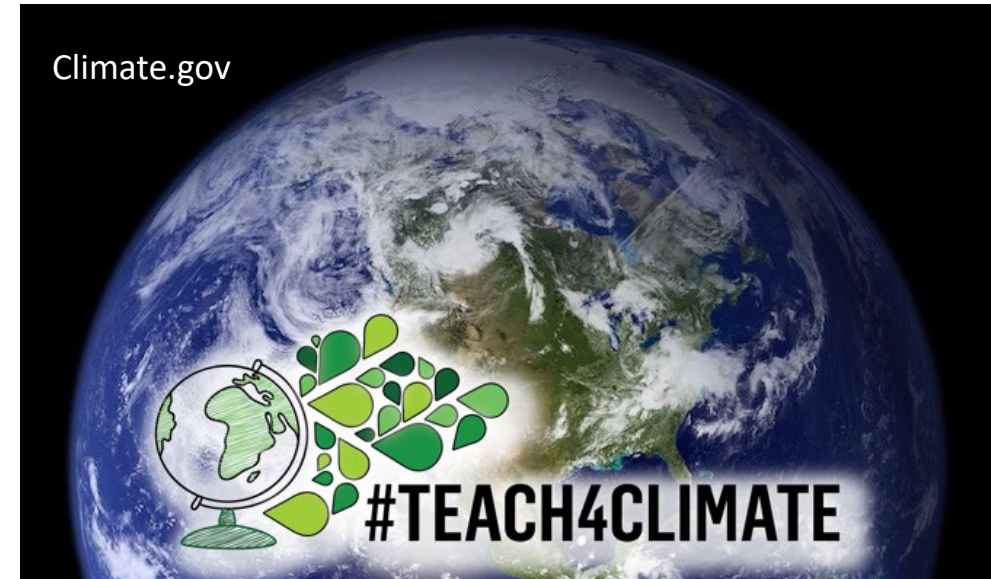
- > Require consideration of all climate hazards in public infrastructure decisions
- > Incentivize use of natural resilience measures
- > Require use of natural resilience measures in state contracts
- > Require vulnerability assessment and resilience strategies in state-funded planning



Benefits of natural resilience measures: habitat, drought mitigation, extreme heat mitigation, recreation, water filtration, carbon sequestration

AR3: Strengthen meaningful community engagement and public education, and build adaptive capacity across all sectors.

- > Establish a campaign to build awareness of climate change effects and solutions
- > Train building operations staff in disaster preparedness and response
- > Provide resilience audits and financing
- > Establish a climate action corps to employ and train disadvantaged youth in ecosystem restoration and green infrastructure installation
- > Establish a Climate Smart Community Student Corps to train students to engage with municipalities and community groups



Public education and awareness programs are necessary to ensure public acceptance of programs to mitigate and adapt to climate change.

AR4: Identify and evaluate options for supporting equitable adaptation and resilience practices and projects, and to enhance insurance protection (1 of 2)

- > Create a resilient infrastructure fund
- > Impose a surcharge on insurance premiums for select lines of insurance to generate revenue to support risk-reduction projects
- > Report on options to create tax exemptions for risk-reduction measures and establish a revolving fund to support regional and local risk-reduction and adaptation projects
- > Develop a comprehensive strategy to encourage investment by anchor institutions to equitably address climate change and local community wealth building
- > Extend community preservation funds statewide



Significant investments in resilient infrastructure will be required to adapt to a changing climate.

AR4: Identify and evaluate options for supporting equitable adaptation and resilience practices and projects, and to enhance insurance protection (2 of 2)

- > Examine options to enhance hazard mitigation funding, to prefund disaster recovery and transfer risk
- > Survey the amount and types of coverage purchased by homeowners and develop strategies for increasing take-up rates
- > Prohibit anti-concurrent causation clauses for sewer backup insurance coverage where flood is the cause



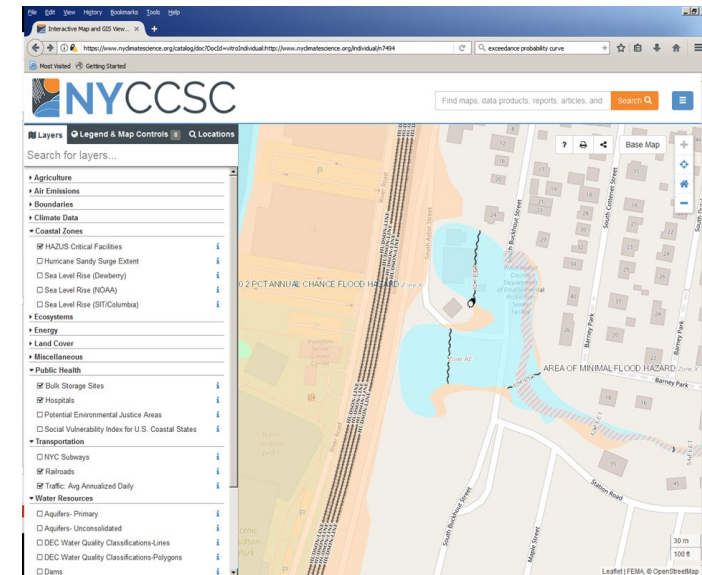
In NYS, only about half of the residential structures in mapped 100-year floodplains are covered by flood insurance, and owners of many homes outside mapped floodplains, but still at substantial risk, do not purchase flood insurance.

Communities and Infrastructure

- > Provide state agency planning and technical support for equitable regional and local adaptation and resilience plans and projects. (AR5)
- > Evaluate opportunities to ensure equitable consideration of future climate conditions in land-use planning and environmental reviews. (AR6)
- > Develop policies, programs, and decision support tools to reduce risks associated with coastal and inland flooding. (AR7)
- > Develop policies and programs to reduce human risks associated with new patterns of thermal extremes. (AR8)
- > Ensure the reliability, resilience and safety of a decarbonized energy system. (AR9)

AR5: Provide state agency planning and technical support for equitable regional and local adaptation and resilience plans and projects (1 of 2)

- > Support development of local government and community-led resilience, continuity and adaptive capacity
- > Expand the role and capacity of local and regional leaders and advisory bodies
- > Support deployment of online tools to facilitate vulnerability assessments, adaptation planning and implementation
- > Continue and expand the Climate Leadership Coordinators program
- > Assist local governments to adopt and integrate climate change considerations into local regulatory programs and land-use plans
- > Develop and support local economic resilience strategies



Effective local and regional adaptation planning will require state support in the form of technical assistance, and information and decision-support tools, like NYSERDA's Climate Change Science Clearinghouse.

AR5: Provide state agency planning and technical support for equitable regional and local adaptation and resilience plans and projects (2 of 2)

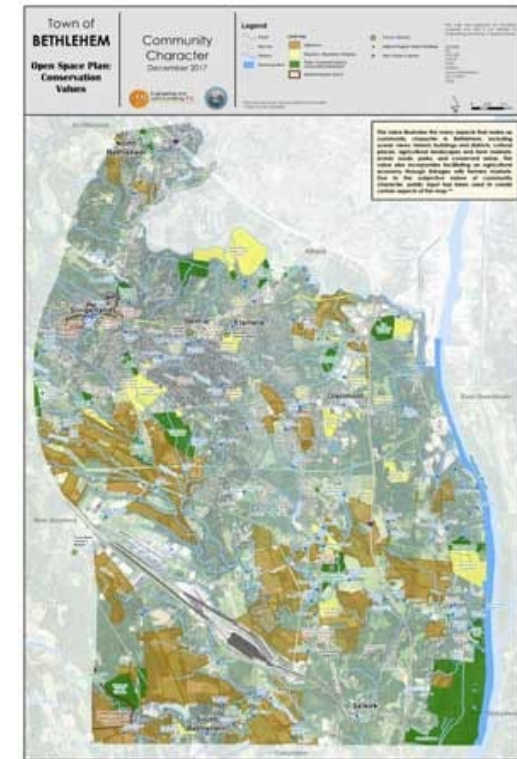
- > Support pre-event, long-term recovery planning
- > Analyze managed retreat and buyout of properties as potential alternatives prior to electrification of at-risk buildings
- > Establish strike teams to assist municipalities with post-disaster recovery
- > Develop a climate migration strategy



An estimated \$8.1 billion of the \$62.5 billion in losses to Superstorm Sandy is attributable to human-caused sea-level rise alone.

AR6: Evaluate opportunities to ensure equitable consideration of future climate conditions in land-use planning and environmental reviews

- > Provide guidance on consideration and mitigation of climate change risks in permit and SEQRA reviews, amend SEQRA Handbook and workbooks
- > Facilitate approval of adaptive projects
- > Amend legislation to include resilience, climate change mitigation and adaptation, and maintenance of biodiversity as potential topics in comprehensive plans



Local governments can have substantial impact on local resilience and adaptive land use through their comprehensive plans and zoning.

AR7: Develop policies, programs, and decision support tools to reduce risks associated with coastal and inland flooding (1 of 2)

- > Develop flood-risk mapping strategy to include assessment of changes in riverine flood risk, flood map inventory, and floodplain designation scalability assessment
- > Explore the use of multi-hazard, climate-informed datasets on flood hazard
- > Digitize dam failure inundation maps and integrate with other geographic resources to improve emergency planning and response, and explore approaches to use these maps to enhance public information and outreach efforts
- > Increase the pace of local floodplain assessments

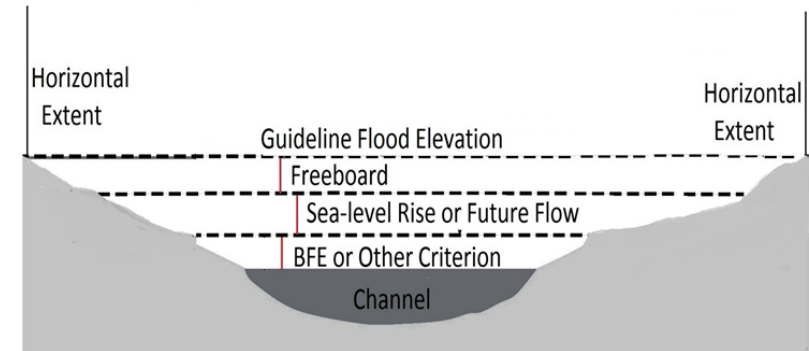
NYS Insured Losses

Decade	Losses (millions)
1950s	\$44
1960s	\$37
1970s	\$866
1980s	\$152
1990s	\$757
2000s	\$762
2010s	\$11,547

New York's flood losses have increased substantially over the past several decades.

AR7: Develop policies, programs, and decision support tools to reduce risks associated with coastal and inland flooding (2 of 2)

- > Support municipal right-sizing of culverts and bridges, and dam assessment and removal
- > Support municipal participation in Community Rating System
- > Support incorporation of CRRRA guidelines into local floodplain regulations
- > Amend state building code to account for sea-level rise and enhanced riverine flooding, and potential use of innovative structures, e.g., amphibious buildings
- > Support restoration of buy-out areas to maximize flood protection, carbon sequestration and other ecosystem benefits



The state building code does not currently require consideration of sea level rise.

AR8: Develop policies and programs to reduce human health risks associated with new patterns of thermal extremes (1 of 2)

- > Support development of regional and local heat emergency plans
- > Provide training, assistance, and/or guidance on reduction of thermal risks to local public health staff, code officials and others
- > Adopt a strategic plan to promote use of natural resilience measures, shade structures, cool roofs, cool pavements, parks and spray pads to reduce risks
- > Amend state building code to require more effective weatherization



A variety of methods are available to reduce health effects of extreme heat, while providing business and job opportunities.

AR8: Develop policies and programs to reduce human health risks associated with new patterns of thermal extremes (2 of 2)

- > Facilitate access to programs that provide cooling equipment to vulnerable populations
- > Support development of cooling centers, including accessibility via public transportation
- > Develop and maintain heat warning systems
- > Enhance and leverage the NYS Weatherization Assistance Program to deepen indoor comfort for extreme conditions
- > Develop and update educational materials and messaging for vulnerable populations, workers and other key stakeholders

An estimated 44% of NYC heat-related deaths between 1991 and 2018 have been attributed to human-induced global warming.



AP Photo/Peter Morgan

AR9: Ensure the reliability, resilience and safety of a decarbonized energy system (1 of 2)

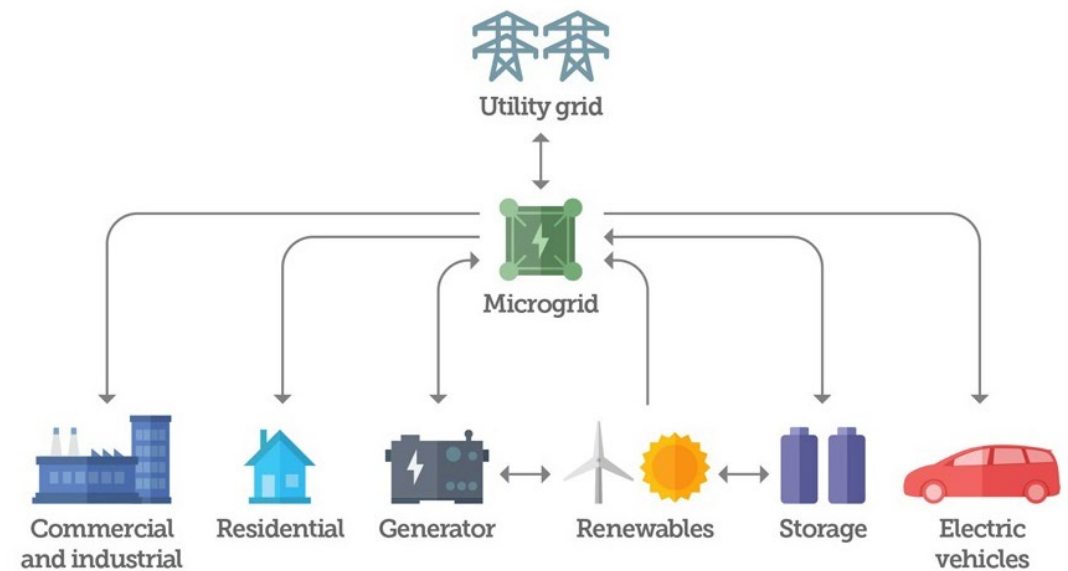
- > Require utilities and generators to assess vulnerabilities to climate hazards and implement risk-reduction plans
- > Prioritize energy system investments to ensure reliability and resilience
- > Ensure siting and design of energy assets are resilient to future climate hazards
- > Promote energy efficiency upgrades and capital improvements to buildings to endure grid failures and to facilitate buildings' ability to accept power when system re-energized



New York's energy system must be resilient to the most extreme future conditions to avoid disastrous blackouts, like the one that affected lower Manhattan in the aftermath of Superstorm Sandy.

AR9: Ensure the reliability, resilience and safety of a decarbonized energy system (2 of 2)

- > Ensure availability of fuel and power for emergency vehicular fleet operations and essential public transportation during power grid outages
- > Establish a resilience plan for EV-charging infrastructure to ensure access to transportation, including evacuation during extreme weather events
- > Include requirements for PV and EV-charging readiness in building code
- > Support development of islandable microgrids and district systems using renewable energy sources



Source: LG CNS © 2016 The Pew Charitable Trusts

Islandable microgrids can provide back-up power to critical facilities in the event of a grid outage.

Living Systems

- > Develop policies and programs to reduce risks threatening ecosystems and biodiversity. (AR10)
- > Enhance climate resilience and adaptive capacity of agricultural community, while preparing to take advantage of emerging opportunities. (AR11)
- > Develop policies and programs to preserve and protect the ability of forest ecosystems to sequester carbon. (AR12)

AR10: Develop policies and programs to reduce risks threatening ecosystems and biodiversity (1 of 4)

- > Adopt goals of Resolution on Ecological Connectivity, Adaptation to Climate Change, and Biodiversity Conservation
- > Develop statewide conservation framework
- > Establish conservation corridors to implement an integrated, watershed approach to improve critical terrestrial and aquatic habitats
- > Improve wildlife and aquatic connectivity, including through use of standardized environmentally friendly design features, during transportation infrastructure improvement projects
- > Prioritize protection of large private forest parcels and biodiversity

**To keep every cog
and wheel is the
first precaution of
intelligent tinkering.**
-Aldo Leopold

AR10: Develop policies and programs to reduce risks threatening ecosystems and biodiversity (2 of 4)

- > Expand Land Trust Alliance-administered forest easement program
- > Amend Real Property Tax Law to incentivize private forest stewardship for a broader range of environmental goals
- > Continue development of conservation easement and incentives to include areas of farms set aside for conservation purposes
- > Promote use of natural climate solutions and best management practices
- > Support local development of natural resource inventories; land-use, watershed and drinking water source protection plans; and regulations that protect important habitats
- > Make eligibility for certain state programs contingent on biodiversity protection and contributions to other climate action priorities



AR10: Develop policies and programs to reduce risks threatening ecosystems and biodiversity (3 of 4)

- > Ensure regulatory oversight for wetlands and waterbodies
- > Map and inventory all wetlands and other critical habitats and make information publicly available.
- > Improve and expand regulation of freshwater wetlands
- > Expand the Aquatic Connectivity Restoration funding to incorporate climate risks to aquatic ecosystems in project selection and prioritize culvert/road crossing vulnerabilities for enhanced funding
- > Develop regional permits with Army Corps of Engineers to incentivize use of natural resilience measures to enhance resilience and ecosystem benefits



AR10: Develop policies and programs to reduce risks threatening ecosystems and biodiversity (4 of 4)

- > Seek to site major energy infrastructure in ways that avoid or minimize significant damage to critical wildlife habitats or drinking water sources, and leverage mitigation funding to mitigate unavoidable effects
- > Incorporate best management practices from species management plans into state and federal funded or regulated projects in or near critical habitats to reduce and mitigate ecosystem impacts
- > Heighten consideration of biodiversity and enhancement of carbon sequestration in state forest land planning
- > Expand implementation of Invasive Species Comprehensive Management Plan, especially advanced prevention and early detection, and improved response. Advance biocontrol of forest pests
- > Ensure protection of stream buffers



Riparian buffers provide valuable habitat and shade, reduce water velocity, absorb and store water, and then slowly release it to the landscape.

AR11: Enhance climate resilience and adaptive capacity of the agricultural community, while preparing to take advantage of emerging opportunities

- > Expand support for Climate Resilient Farming and Agricultural Environmental Management programs, including efforts to increase adoption of climate-resilient practices
- > Develop and support a water and energy efficiency realization program
- > Expand support for research and outreach on climate-resilient crop varieties, technology to provide freeze and frost protection, strategies to address invasive species, pathogens and pests, and increased use of perennial crops for food and feed
- > Promote agricultural and watershed-based best management practices for flood attenuation, drought mitigation and water quality protection



New York's farmers face greater risks of drought, extreme heat and floods.

AR12: Preserve and protect the ability of forest ecosystems to sequester carbon

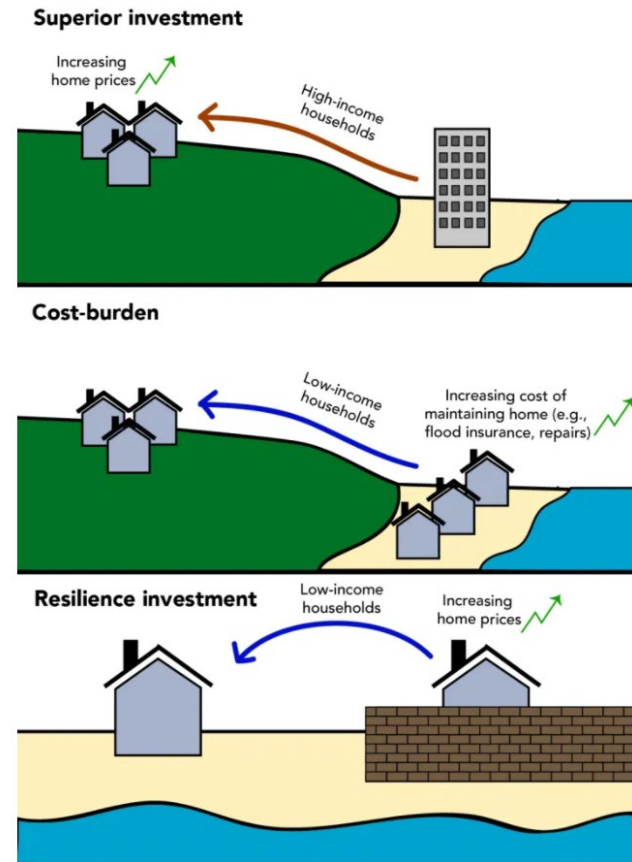
- > Incentivize improved private forest management, including afforestation, reforestation, and minimal or no-harvest areas where appropriate
- > Develop and promote best management practices to maintain or improve soil health and water quality and reduce harmful harvest and management effects
- > Develop recommendations for creating and maintaining resilient forests, including recommendations to address herbivory, pests and invasive species, and recreational overuse, and incorporate them into management of NYS lands, and in outreach programs to private and industrial forest landowners
- > Include resilience criteria in state acquisition programs



New York's forests, and their ability to serve as carbon sinks, face a variety of threats, including deer, overuse and invasive pests.

Benefits and impacts – Disadvantaged communities

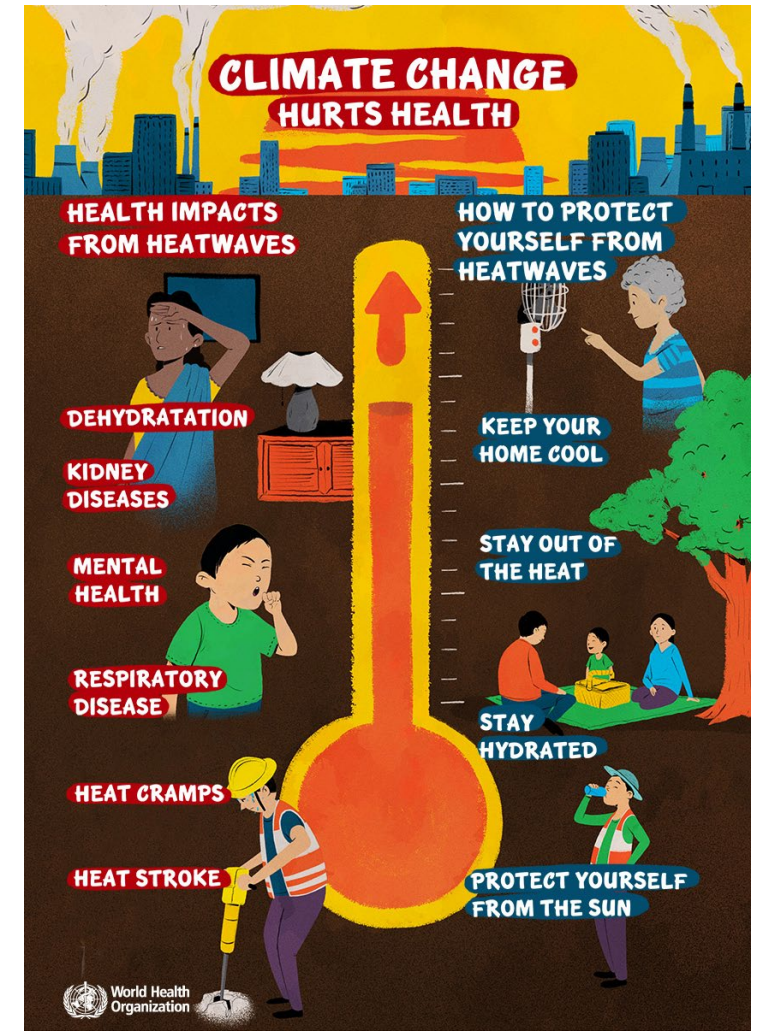
- > Disadvantaged communities most vulnerable to climate change
- > Opportunity to address vulnerabilities of disadvantaged communities
- > Need for deliberate action to integrate equity into resilience planning and financing required
- > Need to avoid climate gentrification
- > Targeted workforce training, job creation
- > Improved community engagement



A 2018 study from Harvard University proposed three examples of mechanisms by which climate gentrification occurs. - [harvard.edu](https://www.harvard.edu)

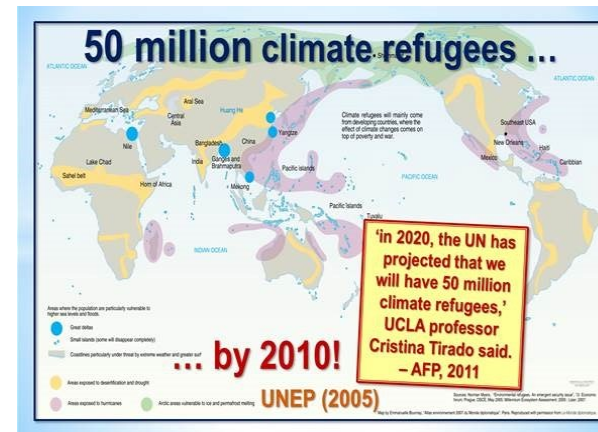
Benefits and impacts – Health and co-benefits

- > Opportunity to evaluate and mitigate health effects during consideration of climate change
- > Direct health benefits:
 - Reduced mold exposure
 - Reduced respiratory disease
 - Reduced exposure to floods, contamination
 - Reduced heat stress
- > Co-benefits of ecosystem health:
 - Water quantity and quality
 - Air quality
 - Recreation



Benefits and impacts – Just transition: businesses and industries, workers

- > Demand for skilled design professionals, tradespeople
- > Training and placement targeted toward communities and industries in transition
- > Construction jobs, business opportunities
- > Economic resilience
- > Business continuity
- > Preparation for climate migration



A Solar Village home being produced in the manufacturing facility in Geneva. The Solar Village company currently employs 22 people; more jobs are expected as the company builds more homes for the proposed Ithaca Solar Village.

Next Steps

Next Steps

Upcoming Meetings

- > **June 28:** Climate Justice Working Group feedback on Advisory Panel recommendations
- > **July 22:** Integration Analysis Reference case presentation and discussion, updated Climate Assessment
- > **September 13:** Integration Analysis initial scenarios presentation and discussion
- > **October 14:** Integration Analysis final scenarios presentation and discussion

Speaker Series

- > 1st topic of speaker series: Reliability
 - Invited speakers from New York State Reliability Council, NYISO, Utility Intervention Unit, Utility Consultation Group, DPS
 - Further events and information will be posted on climate.ny.gov as they are finalized