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Draft Scoping Plan Comments
NYSERDA
17 Columbia Circle
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Re: Comments on the Climate Action Council's Draft Scoping Plan

Set out below are the comments of the New York Public Interest Research Group (NYPIRG) on the Draft Scoping Plan created pursuant to the Climate Leadership and Community Protection Act (the "Climate Act" or "CLCPA"). NYPIRG appreciates the tremendous work that has gone into creating the Draft Scoping Plan, developed over more than two years by the Climate Action Council ("CAC"), the Advisory Panels, many public and private stakeholders, members of the public, and CAC staff.

The Draft Scoping Plan ("DSP" or the "Plan") is ambitious and wide ranging in breadth, representing a prodigious amount of input and thinking. It benefits from years of ground-laying work by staff at the New York State Department of Environmental Conservation (DEC), the New York State Energy Research and Development Agency (NYSERDA), the Public Service Commission (PSC), the New York State Department of Health (DOH) and consultants, hundreds of climate advocacy groups and countless members of the public. NYPIRG commends these substantial contributions to advancing New York as a climate leader.

The DSP, however, contains **five** major shortcomings, which we will summarize now, and dive more deeply into later.

1. Annual Scorecard & 2022-2050 Climate Action Plan: The State should release annual *Climate Scorecards* summarizing a Progress Report that shows how the State is meeting the CLCPA goals, with regular adjustments to ensure NY stays on track. This is an essential accountability tool to help New Yorkers understand whether the state is meeting goals in key areas and by key metrics.

A necessary predicate for the Scorecard is a requirement for the DEC, NYSERDA, DPS, and PSC to develop and release a comprehensive *New York State 2022-2050 Climate Action Plan.* The DSP obscures how the State will achieve critical CLCPA goals as it does not establish greenhouse gas emission reduction targets by sector. The Final Plan should require the creation of a *New York State 2022-2050 Climate Action Plan*, detailing how the State will achieve the CLCPA goals to phase out fossil fuel energy and increase renewable energy, including recommendations for any needed regulations, programs, legislation and funding. It should break out greenhouse gas emissions reduction targets by sector and by year (2022 to 2050) to establish a clearly delineated roadmap, with benchmarks, timetables, and annual actions. These documents enable the public to assess whether the State is reaching the Climate Act goals, and if it is not, bolster support for the tough policy choices required. To ensure oversight by the public, policymakers, and other stakeholders, regular public comment periods, hearings, and meetings should be held.

Both the "Scorecard" and the "Climate Action Plan" should be subject to an independent review to ensure that future Administrations are advancing toward these goals without changing methodologies or goals or relying on inadequately justifiable policies.

2. *"Climate Superfund"*: The State's climate goals will not be achieved unless necessary programs are adequately funded – and it is expected that the price tag will be enormous. The Plan fails to identify and recommend absolutely critical funding mechanisms to ensure the CLCPA's historic and landmark transition to a fossil-free future actually occurs. The Plan should require that the State enact an economy-wide polluter fee as part of a "Climate Superfund" (a program that charges the industries most responsible for the climate crisis the world is facing) to reduce GHG emissions, invest in renewable energy infrastructure, and support protections, mitigation, and just transition expenses.

3. *Improve Energy Efficiency and Renewable Energy Generation*: The proven, low-tech, scalable energy efficiency measures in the DSP are given short shrift, instead of anchoring the Scoping Plan. Energy efficiency measures reduce consumption across the board, create perpetual consumer savings, have comparatively fast payback periods, and lighten electric demands on the grid. New York should make good on recent renewable energy planning to make sure recently awarded projects move through to energy generation and transmission in a timely manner.

***4. Establish an Office of Climate Education & Community Engagement*:** An Office of Climate Education and Community Engagement is needed to coordinate a robust public education and engagement campaign that informs, updates and enlists *all* New Yorkers in the decades-long transformation to stave off the Climate Crisis. New Yorkers will be asked to make financial contributions and lifestyle adaptations to the effort; without public understanding of the problem and the rationales behind the state's approaches, the prospects for success will be diminished. This Office would play a crucial role in educating the public on the State's progress as it would have input into to the Scorecard mentioned earlier and help disseminate that information to New Yorkers.

***5. Be More Aggressive on Electric Vehicle Adoption*:** The Final Plan must be more aggressive in removing barriers to entry in New York, building out charging infrastructure, and supporting early purchases of Electric Buses.

NYPIRG's comments focus on ways to remedy these shortcomings and improve the Final Scoping Plan. NYPIRG also endorses specified comments jointly submitted by commenter groups including ALIGN, AGREE, EarthJustice, Environmental Advocates NY, Sierra Club, *et al*. with respect to Buildings, Electric Sector, Gas System Transition, Just Transition, and Transportation, as well as the comments on the waste sector by Beyond Plastics.

Foreword: The Climate Act Implementation Mindset Must be "Do More, Faster."

At the outset, NYPIRG urges the CAC and all involved agencies to approach the enormous task of Climate Act implementation with the mindset of *"do more, faster."* The planet is *literally burning* and a failure to act *now* will lead to irreversible calamities.

The Climate Act's "Legislative Findings and Declaration" and the DSP laid out in some detail the damage New York has already experienced and will experience if it fails to act. In just the past decade, the unchecked climate crisis has resulted in billions of dollars in property damage, lives lost, public health compromised, precious natural resources damaged and in some cases lost forever, and disadvantaged communities suffering under disproportionate burdens.

U.N. Secretary General António Guterres in his statement upon the release of the June 2021 Intergovernmental Panel on Climate Change report made it abundantly clear what is at stake if the world fails to act aggressively:

> "Today's IPCC Working Group 1 report is a code red for humanity. The alarm bells are deafening, and the evidence is irrefutable: greenhouse-gas emissions from fossil-fuel burning and deforestation are choking our planet and putting billions of people at immediate risk. Global heating is affecting every region on Earth, with many of the changes becoming irreversible."[1] [Emphasis added.]

The planet and our health have never been so imperiled. The United Nations International Panel on Climate Change (IPCC) 2022 report resulted in a clarion call from the report's co-chair: "*It's now or never, if we want to limit global warming to 1.5°C (2.7°F); without immediate and deep emissions reductions across all sectors, it will be impossible*."[2] [Emphasis added.]

Low-income communities and communities of color will be hit first and worst by the climate crisis – from displacement due to hurricanes, hospitalizations from heatwaves, or illnesses and death from chronic air pollution. A recent EPA report found African Americans, Hispanics, Asians, and other people of color are exposed to worse air quality regardless of income.[3] A 2021 Harvard study found "worldwide, air pollution from burning fossil fuels is responsible for about 1 in 5 deaths -- roughly the population of New York City."[4] This isn't just about health -- the UN reports rising heat will lead to the global loss of over *80 million jobs* by 2030.[5] 2030 is only *8 years* away.

With Washington mired in gridlock and the hobbling of the U.S. Environmental Protection Agency by the U.S. Supreme Court, it is clearer than ever that the states must lead on climate. New York has the tools, know-how, and policy proposals to lead the nation with the implementation of its landmark Climate Act.

Any delay will leave unchecked the deaths, human suffering, and staggering costs from flooding, storms and heatwaves. A recent federal report underscores why the State must take bold and assertive action now. According to a federal database, from 2000 to 2021, New York State experienced 53 climate disasters totaling $1 billion in damages or more: 28 severe storms, 11 tropical cyclones, 7 winter storms, 4 droughts,

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[1] *Secretary-General Calls Latest IPCC Climate Report 'Code Red for Humanity', Stressing 'Irrefutable' Evidence of Human Influence*, August 9, 2021. Accessed at https://www.un.org/press/en/2021/sgsm20847.doc.htm.

[2] Jim Skea, Co-Chair of IPCC Working Group III, which released the report *2022: Mitigation of Climate Change*, quoted in UN News, *Climate Report: It's 'Now or Never' to Limit Global Warming to 1.5 Degrees*, United Nations, April 4, 2022. Accessed at https://news.un.org/en/story/2022/04/1115452.

[3] *Study Finds Exposure to Air Pollution Higher for People of Color Regardless of Region or Income*, U.S. EPA, September 9, 2021. Accessed at www.epa.gov/sciencematters/study-finds-exposure-air-pollution-higher-people-color-regardless-region-or-income.

[4] *Fossil Fuel Air Pollution Responsible for 1 in 5 Deaths Worldwide*, Harvard T.H. Chan School of Public Health, February 9, 2021. Accessed at https://www.hsph.harvard.edu/c-change/news/fossil-fuel-air-pollution-responsible-for-1-in-5-deaths-worldwide.

[5] *Rising heat stress could cost 80 million jobs by 2030 - U.N.*, Lin Taylor, *Reuters*, July 1, 2019. Accessed at https://www.reuters.com/article/us-global-climate-jobs/rising-heat-stress-could-cost-80-million-jobs-by-2030-u-n-idUSKCN1TW36W.

and 3 flooding events.[6] The cost of these disasters is up to $100 billion over the last 21 years, and in 2021 alone, up to $20 billion.[7] Communities in New York City, and along the shores of Long Island, Lake Ontario, Lake Erie, the Hudson River and other water bodies are especially at risk from storm surges and flooding.

The United Nations' IPCC October 2018 report made clear the world needs to limit global warming to 1.5 degrees Celsius if catastrophic results are to be avoided.[8] As the world's greatest source of heat-trapping gases over the past decades, the United States has a particular obligation to lead; and New York is positioned to forge the path, and it must to do so to avoid catastrophe for the State's – and the world's – children and grandchildren.

Limiting global warming to 1.5ºC requires rapid, far-reaching and unprecedented changes in all aspects of society. Accordingly, New York needs to maximize energy efficiency, aggressively eliminate its reliance on energy derived from fossil fuels, and assertively promote renewable energy in all economic sectors. If the State does not, all aspects of our 21st century lives will be affected.

At the heart of the Climate Act is codifying in law and regulatory implementation, mandates to achieve net-zero greenhouse gas emissions (GHG) by 2050 with the interim goal of emitting no more than 60% of 1990 GHG by 2030.[9] The Climate Act also requires the state to power its electric grid through at least 70% renewable energy by 2030, and achieve electricity generated by 100% renewable energy by 2040.[10] Another groundbreaking aspect of the Climate Act is the provision to prospectively address the long history of hazardous, unfair and discriminatory treatment of Disadvantaged Communities[11] and to ensure the wellbeing of workers who will or may be displaced by the transition through a Just Transition Working Group, and action plan.[12]

NYPIRG urges the CAC, the Governor, State Legislature and relevant state agencies to approach the Climate Act implementation with a mindset that we must *do more, faster,* to adequately respond to the climate crisis, and avert and mitigate the worst scenarios.

1. Issue an Annual Scorecard, Progress Report and a 2022-2050 Climate Action Plan Based on Sector-by-Sector Benchmarks to Track the State's Progress in Achieving the Climate Act Goals.

"We are drowning in information but starved for knowledge."
- John Naisbitt, *Megatrends,* 1982

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[6] *Billion-Dollar Climate and Weather Disasters (New York State)*, National Centers for Environmental Information, National Centers for Oceanic and Atmospheric Administration. Accessed June 26, 2022 at https://www.ncei.noaa.gov/access/billions/events/NY/2000-2021.
[7] *Ibid*.
[8] *We Have 12 Years to Avoid Climate Change Catastrophe, Warns U.N.*, Jonathan Watts, *The Guardian*, October 8, 2018. Accessed at https://www.theguardian.com/environment/2018/oct/08/global-warming-must-not-exceed-15c-warns-landmark-un-report.
[9] Codified at Environmental Conservation Law section 75-0107.
[10] Codified at Public Service Law section 66-p. "Renewable Energy" includes energy generated by renewable, non-polluting sources such as solar, wind, and hydropower, but does not include nuclear power or electric generated by burning solid waste.
[11] *See, e.g.*, Environmental Conservation Law section 75-0117. *Also see* Environmental Conservation Law Article 48, creating permanent Environmental Justice Advisory Group and passed in tandem with the Climate Act.
[12] Codified at Environmental Conservation Law section 75-0113(8).

The amount of information and data on climate and energy is *overwhelming*. Much of it is highly technical. It includes myriad sources talking about issues differently, use different yardsticks to measure the same things; for the lay public the jargon is akin to a new language. This undermines public understanding of climate issues, dilutes public confidence and ultimately makes it harder to get everyone pulling in the same direction. In the absence of clear understanding, the public's response may be disinterest or perhaps worse: resistance. Presenting clear, understandable information and analysis is *essential* to maximizing public support, cooperation and beneficial participation among New Yorkers.

Beyond public understanding and participation, New Yorkers are entitled to and deserve accurate, understandable information on climate progress. This is particularly true because in the past New York State has a poor record of meeting climate and energy goals. The public's understanding and active support is also absolutely critical. Releasing annual progress Scorecard summaries, and a more detailed Report, will educate and help to engage the public so people can assess whether the state is reaching the Climate Act goals, and if not, bolster support for the tough policy choices required.

Inclusion of an annual *Scorecard* and *CLCPA Progress Report* are crucial government accountability measures that must be required in the Final Scoping Plan to help ensure the State achieves the annual requirements to meet the CLCAP's legally mandated goals.

Sadly, as yet, New York State has not publicly unveiled such an accountability measure. Thus, at the end of these comments NYPIRG is providing to the public a Scorecard to document where New York stands in respect to its critical climate goals. NYPIRG's *Climate Act 2022 Scorecard* breaks down key CLCPA climate goals and uses publicly available information to evaluate New York's progress.

To motivate New York to adopt such policies, an annual Scorecard and Report for the public must be widely disseminated. NYPIRG can only access information that is publicly available. New York State has far more resources and tools at its disposal to offer a more comprehensive scorecard. The public's access to this information will be key to pushing New York State to annually implement critically important legislative, funding, regulatory and administrative actions to achieve the CLCPA goals.

Inclusion of a "2022-2050 Climate Action Plan" must establish GHG reduction and other CLCPA targets *by sector by year* to establish a clearly delineated roadmap for meeting the legally mandated Act goals.

A predicate to the creation of annual Climate Scorecards and Progress Reports is establishing annual benchmark goals and a plan for each sector – from 2023-2050 – to mark the State's path year-by-year. The Climate Act is not voluntary; the State has an obligation to enforce the law.[13] The CAC's final Scoping Plan informs the core of the State Energy Plan, and all state agency plans.[14] Yet the DSP fails to break out annual benchmarks to be met in order to reach the interim and final mandated CLCPA goals.

The State is running a marathon to reach the CLCPA goals, and to do so it must know where it needs to be each year in order to hit the key benchmarks to meet the legal mandates in the milestone years.

The Plan should not obscure how the State will achieve the critical CLCPA goals. It should establish greenhouse gas emission reduction targets by sector to establish a clearly delineated roadmap, with

[13] Environmental Conservation Law section 75-0107.

[14] Environmental Conservation Law section 75-0103(11) provides that "[t]he first state energy plan issued subsequent to completion of the scoping plan required by this section shall incorporate the recommendations of the council."

benchmarks and timetables. Thus, the Final Scoping Plan should require the DEC, NYSERDA, DPS and PSC to develop and release a comprehensive *New York State 2022-2050 Climate Action Plan* this year, detailing how the State will achieve the CLCPA goals to phase out fossil fuel energy and increase renewable energy, including sector-specific action plans, milestones, and recommendations for any needed regulations, programs, legislation and funding.

This blueprint document is absolutely crucial to ensure the Climate Act is adequately implemented. If there are no annual goals, New Yorkers will be unable to understand how well government, the private sector, and residents are doing in terms of progress in responding to the Climate Crisis. The benchmark numbers or other objective goals will be subject to revision as circumstances, technology and enumerable other events and changes unfold. Regardless of the need for revisions, the *requirement* for annual benchmarks must be part of the Final Scoping Plan and we urge its inclusion in the necessary 2022-2050 Climate Action Plan.

This is a glaring omission that substantially diminishes the CLCPA chances for success. The CAC should look to the work of NYSERDA, which issues annual reports on their renewable energy progress, and add to it by setting benchmarks, and annual adjustments to ensure goals are achieved. It is also incumbent on the CAC to require a public comment period on the 2022-2050 Climate Action Plan, and annual Scorecards and Progress Reports, to ensure the State includes the critical component of public accountability.

It bears repeating: There is a long history of broken promises on the environment -- whether it be never realizing the climate goals set by governors Pataki, Spitzer and Paterson, or goals for solid waste recycling, reuse and reduction; lead decontamination in low-income housing; State Superfund and Brownfield site cleanups, or reducing the use of pesticide and herbicide use.[15] As of now there is no instrument for the public to adequately monitor and hold accountable the State's progress in achieving GHG emission reductions.

A publicly accessible report on the State's GHG emission reduction progress by sector, based on the previous year's data, is absolutely critical. The State and the CAC Final Scoping Plan must specify the level of mandated GHG emission reductions that each sector must achieve by the years specified in the CLCPA. Benchmarks must be established specifying the sector-specific required reductions, with annual reports to monitor and track specific benchmarks. State agency or agencies responsible for enforcing the CLCPA targets for each sector should be specified, and regulatory steps by sector that are necessary to ensure that each sector can achieve its goals, including legislation.

Attached is NYPIRG's *Climate Act 2022 Scorecard* to help New Yorkers understand where the State stands on critical climate goals. It reports on each major CLCPA goal to evaluate New York's progress, using publicly available information.

Below is the recommended template for a New York State Climate Act Scorecard, including issue areas and sectors for measurement and annual Progress Reports

Reducing GHG Emissions by the following sectors:

- Buildings

[15] This is certainly true on the Federal level as well -- *e.g.*, the Clean Water Act and Clean Air Act goals are in some cases *decades* behind statutory and/or promised timelines.

- Transportation
- Electricity
- Waste
- Industry
- Agriculture and Forestry

Increasing Renewable Energy

- Expanding Solar, Wind, and Geothermal Energy
- Expanding Energy Storage
- Improving Energy Efficiency

Funding

- Just Transition & Workforce Development
- Disadvantaged Communities Support and Funding
- Consumer Affordability
- Protection & Mitigation Measures
- Local and Regional Government Partnerships
- Public Education
- Public Health Metrics
- Public Participation

2. Identify Funding Mechanisms, Such As A *Climate Change Superfund*, to Underwrite the Immense Transformation That Must Occur Under the CLCPA.

The State's climate goals will not be achieved if it does not fund them. For years, residential and business electric and gas utility customers have been footing the bill for the state's energy programs – including subsidizing the aging upstate nuclear plants to enrich Fortune 100 plant owners. The CLCPA transition costs will be orders of magnitude larger than what the State has ever invested, and ratepayers cannot be expected to foot the lion's share of the bills for a problem they are not responsible for creating.

In the final "Chapter 17, Economy-Wide Strategies," the Final Scoping Plan must include strong recommendation for an economy-wide polluter fee to generate dedicated, recurring funding to reduce GHG emissions and invest in renewable energy infrastructure. A fossil fuel polluter fee puts the biggest greenhouse gas emitters on the hook to pay for the damage they have and are causing. Investing in a green energy economy equals investing in jobs growth and improved public health. In contrast, leaving climate mandates unfunded threatens to put disadvantaged workers and communities further at serious risk.

As we all know, climate change, resulting primarily from the combustion of fossil fuels, is an immediate, grave threat to New York's communities, environment, and economy. In addition to reducing the continued buildup of greenhouse gases, the State must take action to protect, mitigate and adapt to the irreversible consequences of climate change, including rising sea levels, increasing temperatures, extreme weather events, flooding, heat waves, toxic algal blooms and other climate-crisis-driven threats. Maintaining New York's quality of life into the future, particularly for young people, who will experience greater impacts from climate change over their lifetimes, will be one of the State's greatest challenges over the next three decades. Meeting that challenge will require that New Yorkers have a shared commitment of purpose, a determined focus on achieving annual CLCPA benchmarks, and huge investments in new and upgraded infrastructure.

New York has previously adopted programs – the State Superfund, Brownfield and Oil Spill Fund toxic waste site remediation programs – to remediate severe environmental damage to communities, lands and waters based on the principle that companies responsible for environmental harm should pay for the cleanup. No similar program exists yet for the pollution of the atmosphere by greenhouse gas emission buildup as a result of burning fossil fuels – and the time is long overdue to do so.

Based on decades of research, it is now possible to determine with great accuracy the share of carbon dioxide released into the atmosphere by specific fossil fuel companies over the last 70 years or more, so that the State can assign liability to and require compensation from companies commensurate with their emission of carbon dioxide into the atmosphere during a given time period.[16]

The Final Plan should support legislation to establish a Climate Change Adaptation Cost Recovery Program, or Climate State Superfund, to require companies that contributed significantly to the buildup of greenhouse gases in the atmosphere to bear a proportionate share of the cost of infrastructure investments required to adapt to the impacts of climate change in New York State.[17]

The obligation to pay under the program is based on fossil fuel companies' historic contribution to the buildup of greenhouse gases. The program operates under a standard of strict liability; companies are required to pay into the fund because the use of their products caused the pollution. No finding of wrongdoing is required.

Nonetheless, it is important to recognize that the actions of many of the biggest fossil fuel companies have been unconscionable, closely reflecting the strategy of denial, deflection, and delay perfected by the tobacco industry. In spite of the information provided by their own scientists that the continued burning of fossil fuels would have catastrophic results, these companies hid the truth from the public and actively spread false information that the science of climate change was uncertain when in fact it was beyond controversy. This breach of the public trust was breathtaking in its scope and consequences, and it continues to this day. For example, while claiming a commitment to renewable energy, Chevron invested only 2% and ExxonMobil only 1.6% of their total capital investments in low-carbon sources.[18]

In 2022, the fossil fuel industry has taken advantage of several overlapping global crises to earn immense profits (Chevron and ExxonMobil had combined profits for the first quarter of 2022 of over $11.8 billion), charging incredibly high prices while aggressively rejecting any responsibility for the costs of its business activities. While all the profits accrue to the companies, all the costs of climate change are paid by taxpayers. This is a market failure that needs to be addressed through policy change.

The Climate Change Adaptation Cost Recovery Program is remedial in nature, seeking compensation for damages resulting from the past actions of polluters. Payments by historical polluters into the Program would be used for new or upgraded infrastructure needs such as sea walls, storm water drain system upgrades, and air conditioning in public buildings, including school buildings, all of which are necessary to protect the public safety and welfare in the face of the growing impacts of climate change. Disadvantaged communities would receive at least 35% of the overall benefits of Program spending.

[16] One peer-reviewed example is "Tracing anthropogenic carbon dioxide and methane emissions to fossil fuel and cement producers, 1854–2010," Richard Heede, Climatic Change (2014) 122:229–241, DOI 10.1007/s10584-013-0986-y.
[17] *See* S.9417/2022 (Krueger), the "Climate Change Superfund Act."
[18] *Ibid*. *See* Sponsor's Bill Memorandum.

3. Energy Efficiency Must Be Central to the Scoping Plan as It Is Proven, Scalable, and Has a High Return-On-Investment Ratio.

The buildings sector (residential and commercial) is the largest contributor to GHG statewide at 32%. Unlike, *e.g.*, vehicles, there are *no centralized ways* to transform existing buildings – to reduce energy use and transition to electrification. Transformation of this sector will depend on the collective decisions of millions of renters, residential and commercial property owners. And, as discussed further below, ensuring that new construction be all electric to eliminate on-site GHG from heating and cooking is a no-brainer.

A stubborn problem will be the millions of residential units and commercial buildings in existence that are inefficient and reliant on a variety of fossil fuels, minimal insulation, old appliances and inefficient lighting.[19] New York has a bigger problem here than most states: our more than 6 million buildings include the oldest housing stock in the nation – much of it pre-1950. Many older homes – particularly in lower-income communities – have not been upgraded since the 1970s energy crisis, if ever. The DSP does not place enough emphasis or contain sufficient specificity with respect to energy efficiency and the outsize role it can and should play in the Final Scoping Plan.

While the DSP references its "Vision" for "one to two million energy efficient homes should be electrified with heat pumps,"[20] it appears to allow *seven years* to get fully in gear on building efficiency: "more than 250,000 housing units each year will need to adopt electric heat pumps and energy efficiency measures from around 2030 onward from current market activity – with a comparable pace of transformation in the commercial sector."[21]

Particularly for the GHG-leading buildings sector, energy efficiency warrants greater attention and specificity than paid in the DSP.

Amory Lovins of RMI noted the often overlooked benefits of energy efficiency – particularly for "holistic" approaches – in a 2018 article: "With energy efficiency as its cornerstone and needing its pace redoubled, climate protection depends critically on seeing and deploying the entire efficiency resource."[22]

Energy efficiency is critical to solving the climate crisis. It is the "low-hanging fruit" of climate crisis response. In most cases, efficiency measures have proven to be the most cost-effective way to address climate change while reducing energy waste, saving money, and affordably expanding the use of renewable energy resources. Efficiency measures reduce the demand on the grid and other electric sources and lowers consumer and business utility bills. The low-tech, proven, scalable and high return-on-investment approaches will be particularly important for reducing energy use in buildings. The State put into effect a voluntary NYStretch Code 2020, however, more needs to be done as the agency stated in its 2020 report that "The State's investor-owned utilities have been called on to achieve more in both scale and innovation through their energy efficiency activities."[23]

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[19] Energy efficiency is used here to describe the range of approaches that reduce consumption and energy demand, including insulation, building design and construction, demand management, appliance efficiency, new and improved technologies (*e.g.*, heat pumps), and that use waste heat and cooling.
[20] Climate Action Council Draft Scoping Plan, page 120.
[21] DSP p. 130.
[22] *How Big is the Energy Efficiency Resource*? Amory Lovins, *Environmental Research Letters*, Vol. 13, Number 9 (September 2018). Accessed at https://iopscience.iop.org/article/10.1088/1748-9326/aad965/meta.
[2323] NYS Energy Research & Development Agency, *Clean Energy Standard Annual Progress Report: 2020 Compliance Year,* https://www.nyserda.ny.gov/CES-2020-annual.ashx

In addition, Governor Hochul announced a plan to achieve two million "electrified or electrification ready" homes by 2030 and "ensure that more than 800,000 low-to-moderate income households can secure clean energy upgrades."[24] In the residential electrification plan, the Governor directed "Direct New York State Energy and Development Authority (NYSERDA), Homes and Community Renewal (HCR), Department of Public Service (DPS), and Department of State (DOS) to deliver an executable plan to achieve this goal this year, with a funding proposal and strategies to leverage private capital."[25] This plan has not as of yet been publicly released.

NYPIRG strongly supports the DSP recommendation on page 128, which states: "As soon as possible, the State should pass legislation that enables the establishment and enforcement of efficiency standards for appliances that are sold, leased, or installed in New York State. . . ."[26] The Advanced Building Codes, Appliance and Equipment Efficiency Standards Act [S.7176 (Parker)/A.8143 (Fahy)], embodies this recommendation and is supported by 217 national, statewide and regional organizations.

This bill removes barriers in the Energy Law that hinder needed updates to the Energy Code so it aligns with the Climate Leadership & Community Protection Act (CLCPA) goals by improving energy efficiency standards for the construction, rehabilitation and operation of new buildings, products and appliances, and adds a provision prioritizing the CLCPA goals using a newly defined life-cycle cost analysis emphasizing carbon emission reductions.

The bill's product and appliance standards are estimated to result in $15 billion utility bill savings by 2035 for consumers, including an estimated $6 billion for low to moderate income families.[27] The adoption of improved energy efficiency standards and greenhouse gas reductions conserves energy and water, reduces pollution and saves money.

NYPIRG strongly supports the CAC Draft Scoping Plan recommendation on page 124 that the state should enact through legislation in 2022, a building code for highly efficient, all-electric new construction.[28] The All-Electric Building Act [S.6843-C (Kavanagh)/A.8341-B (Gallagher)] embodies this recommendation and is supported by 217 national, statewide, and regional organizations.

The passage of the All-Electric Building Act would make New York the *first state to end fossil fuel use in new building construction*. New buildings would rely on heat pumps for heating, cooling, and hot water and greater energy efficiency. Heat pumps do not combust fossil fuels; they are highly efficient and electric-powered. And this electricity is increasingly powered by wind, solar, and other renewable sources. Such reliance on electricity to provide the necessary power for new buildings is not unheard of. Everything from deeply affordable housing to skyscrapers are being built fossil free.[29] Furthermore, a

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[24] *Governor Hochul Announces Plan to Achieve 2 Million Climate-Friendly Homes By 2030*, NYSERDA, January 5, 2022.Accessed at https://www.nyserda.ny.gov/About/Newsroom/2022-Announcements/2022-01-05-Governor-Hochul-Announces-Plan-to-Achieve-2-Million-Climate-Friendly-Homes-By-2030. The release notes the aspiration to "Raise the current rate of electrification of approximately 20,000 homes per year more than tenfold by the end of the decade."

[25] *Ibid*.

[26] Climate Action Council Draft Scoping Plan, page 128. *See* https://climate.ny.gov/Our-Climate-Act/Draft-Scoping-Plan.

[27] Assemblymember Patricia Fahy Memorandum of Support for A.8143, Feb. 2022, https://nyassembly.gov/leg/?default_fld=&leg_video=&bn=A08143&term=2021&Memo=Y.

[28] Climate Action Council Draft Scoping Plan page 124 https://climate.ny.gov/Our-Climate-Act/Draft-Scoping-Plan

[29] *Low-Carbon Buildings of Excellence Coming to a Neighborhood Near You*, Urban Green Council, July, 2021. Accessed at https://www.urbangreencouncil.org/content/news/low-carbon-buildings-excellence-coming-neighborhood-near-you

New York City study and NYSERDA data confirm non-fossil-fuel-powered, "clean" buildings don't cost more.[30]

The bill prohibits cities, towns, or villages from issuing a permit for the construction of any new gas-fueled commercial or residential building under seven stories starting on 1/1/24, with larger buildings given a 2027 deadline. The bill also prohibits any permits convert a structure to a mix-fueled building or project. Lastly, the bill directs the Department of Public Service, the Division of Housing & Community Renewal, the Department of State, and the Energy Research and Development Authority to report jointly to the Governor and Legislature by February 1, 2023 to assess and recommend electric rate design or policy changes needed to ensure this law does not diminish affordable housing production or affordability of electricity for customers in all-electric buildings.

The timetable for this legislation moves the State forward in meeting the goals of the CLCPA. It also matches NYC's electric buildings law starting in 2024.

Renewable Energy: Renewable energy planning has substantially increased in the last few years, including the awarding of contracts, and should continue. In 2020, NYSERDA stated, "The combined renewable generation portfolio of operating, contracted, and awarded projects is expected to generate approximately 63% [of the required 70%] of New York State's projected 2030 electricity demand."[31] NYPIRG commends NYSERDA for its substantial progress in planning. However, currently New York obtains only 6.8% of its electricity from solar, wind and energy storage plants, ranking 31st in the nation.[32] NYSERDA reports a pipeline of "large-scale renewable generation projects" noting 2021 was "the busiest construction year for new large-scale renewables in the State's history."[33] Though, if expected projects come online, New York will still be shy by 7% in achieving the 2030 goal. New York should make good on recent renewable energy planning to make sure recently awarded projects move through to energy generation and transmission in a timely manner.

4. Create the "New York State Office of Climate Education and Public Engagement."

Outside the Albany "Beltway" and beyond government agencies, utility staff, and climate advocates, most New Yorkers have no idea what awaits them in the very near future when they're asked and increasingly required to change their habits, make decisions among new choices, pitch in financially, and otherwise help New York achieve its Climate Act goals.

Much will be asked of New Yorkers. Some things will be easier and more seamless than others. Many changes will be very difficult for people, especially the elderly, low-income and other disadvantaged populations.

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[30] *Pathways to Carbon-Neutral NYC: Modernize, Reimagine, Reach*, NYC Mayor's Office of Sustainability, Con Edison, National Grid, April, 2021. Accessed at https://www1.nyc.gov/assets/sustainability/downloads/pdf/publications/Carbon-Neutral-NYC.pdf.

[31] NYS Energy Research & Development Agency, *Clean Energy Standard Annual Progress Report: 2020 Compliance Year,* p. S-1. Accesssed at https://www.nyserda.ny.gov/.../CES-2020-annual.ashx NYPIRG and many other organizations are opposed to the expansion of large hydropower projects due to their destructive impacts.

[32] American Clean Power website as of 6/23/2022. https://cleanpower.org/wp-content/uploads/2022/05/New-York_clean_energy_factsheet.pdf

[33] NYS Energy Research & Development Agency, *Clean Energy Standard Annual Progress Report: 2020 Compliance Year,* Pg. 17, https://www.nyserda.ny.gov/.../CES-2020-annual.ashx

New York needs an executive office that will implement a *coordinated multi-media public education initiative* about the Climate Crisis, the state's multi-pronged approaches, and will help spur New Yorkers to be active, engaged participants in promoting the Climate Act's success. Equally important is the need to proactively and regularly engage the public by going to civic centers and town hall meetings, providing community forums, webinars, digital outreach materials, and surveys, attending regional and statewide conferences, and more.

NYPIRG proposes that the state create an executive-level *Office of Climate Education and Public Engagement* to translate complicated information for the general public, develop curricula for schools,[34] programs for civic groups and explain how and why the state is pursuing particular activities under the Climate Act. The *Office of Climate Education and Public Engagement* should be advised by a Citizens Climate Advisory Council, similar to the CAC, comprised of New Yorkers with technical, communications, educational, curriculum development, and community outreach skills. The *Office of Climate Education and Public Engagement* should have a substantial budget and staff and cultivate ties to educational and civic organizations. Coupled with a "Scorecard" to monitor the State's progress toward its climate goals, New Yorkers would be empowered to participate in this profoundly important effort.

There is historical precedent. Among the many actions President Roosevelt took during the early stages of WWII was to create in June 1942 the Office of War Information to help educate Americans and cohere U.S. society in support of the war effort.[35] Public engagement initiatives, such as victory gardens, metal collections, and food and gas rations, were critical in providing support to the nation's defense and keeping up public morale. The Climate Crisis presents a similar existential threat, albeit a diffuse one of our own making. Despite the differences, the Climate Crisis requires collective action, shared sacrifice and unity of purpose to succeed. Educating New Yorkers of all ages will be of critical importance.

New York has a bad track record when it comes to informing and engaging the public on important public policies that affect the lives of New Yorkers. An example is the overhaul of the electric grid through the Reforming the Energy Vision ("REV") proceedings. Complex issues that involved multiple agencies and private players are particularly vulnerable to poor communication with the public. Success with the Climate Act is simply too important to overlook public communications or try and do it on the cheap or as an afterthought. *While the DSP talks at various points about the importance of public education, there is no overarching plan or single entity charged with leading in public education, communications and civic engagement.*

This is a particular concern when it comes to climate programs. "It is not the case that the American public does not respond to scientifically informed reporting when they are exposed to it," said Thomas Wood, associate professor of political science at The Ohio State University. "But even factually accurate science reporting recedes from people's frame of reference very quickly."[36] This recent research underscores why – particularly when it comes to climate policy – it is of critical importance to engage in an ongoing public education campaign.

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[34] Children in K-12 in 2022 will be paying taxes, voting and determining whether the Climate Act is a success in 2040 – a full decade before the 100% net zero emissions goal is to be achieved. For perspective, we are closer to the 2040 "100% renewably generated electric" goal than we are to 9/11.

[35] *See* U.S. Archives *Records of the Office of War Information* at https://www.archives.gov/research/foreign-policy/related-records/rg-208.

[36] "Science coverage of climate change can change minds: Accurate beliefs fade quickly, especially if challenged," Brendan Nyhan, Ethan Porter, Thomas J. Wood. Accessed at https://www.sciencedaily.com/releases/2022/06/220620152117.htm. The study was published June 24, 2022 in the journal *Proceedings of the National Academy of Sciences*. Wood conducted the study with Brendan Nyhan of Dartmouth College and Ethan Porter of George Washington University.

Thus, it is imperative that New York communicate accurately, consistently, and persistently about the threats posed by the Climate Crisis, the opportunities to address this existential threat, and the collective efforts toward meeting the Climate Act's goals to maximize public support and engagement for success.

5. Boost Electric Vehicle Adoption by Removing Barriers to Entry in New York, Building Out Charging Infrastructure and Supporting Early Purchases of Electric Buses.

Transportation is the second leading source of GHG emissions for New York – at 28% of the total, with 59% attributable to road transportation.[37] There are more than nine million (9,000,000) passenger type or "light duty vehicles" ("LDVs") registered in the state; and millions more medium and heavy duty vehicles ("MHD") in government and private fleets. These LDVs result in more GHG emissions than any other component within the transportation sector.

There are 100,580 electric vehicles ("EVs") registered in the state – with 55,483 fully electric battery electric vehicles ("BEVs") and 45,097 plug-in hybrid combustion-battery vehicles ("PHEVs").[38] This means that about 1% of the registered vehicles in New York are EVs – *with only about .7% all electric vehicles*. In contrast, California data shows that New York has a lot of catching up to do in this sector: California – with about twice the population of New York – *has more than six times the number of EVs registered (623,891), including 366,702 BEVs* .[39]

The CAC projects that its recommended transportation policies "will result in as many as three million ZEVs (about 30% of LDVs and 10% of MHD vehicles) on the road by 2030."[40]

Unlike the building sector, central market-based policies can force changes rapidly in this area. New York has taken some steps, including enacting legislation to phase out the sale of internal combustion passenger and light duty vehicles by the end of 2034.[41] The DSP asserts that "[t]he strategies proposed aim for an even more rapid transition to ZEVs, achieving close to 100% ZEV sales for LDVs by 2030. . . ."[42]

Enhance ZEV Awareness, Support Electric Bus Expansion, and Reduce Sales Barriers

NYPIRG endorses the CAC proposal to promote ZEVs and reduce market barriers. In order for New Yorkers to have confidence in EVs, it's critical that there be a rapid build out of the charging infrastructure throughout the state. Unfortunately, to date the New York Power Authority (NYPA) has failed to install EV chargers where they are most needed by the state's more than 50,000 registered EVs, leaving nearly half of the state's counties without any NYPA-installed charging stations, according to an audit by the State Comptroller Thomas P. DiNapoli.[43] The Charge NY 2.0 program in 2018 planned to install 10,000 public charging stations by 2022, however, "despite the allocation of significant funding, NYPA has fallen

[37] DSP p. 94.
[38] *Atlas EV Hub State Electric Vehicle Registration Data (New York)*, accessed June 29, 2022 at https://www.atlasevhub.com/materials/state-ev-registration-data/.
[39] California – with about twice the population of New York – has more than six times the number of EVs registered (623,891), including 366,702 BEVs. *See Atlas EV Hub State Electric Vehicle Registration Data (New York)*, accessed June 29, 2022 at https://www.atlasevhub.com/materials/state-ev-registration-data/.
[40] DSP p. 94.
[41] Chapter 423 L. of 2021, adding a new section 19-0306-b to the Environmental Conservation Law to require only zero emission vehicle sales for passenger cars and trucks as of 2035, with a goal of 100% zero emissions light and heavy duty vehicle by 2045. The law requires DEC to develop a zero emissions vehicle market strategy by January 1, 2023.
[42] DSP p. 101.
[43] NYS Comptroller News Release, 2/24/22, https://www.osc..state.ny.us/press/releases/2022/02/dinapoli-new-york-power-authoritys-installation-electric-vehicle-chargers-years-behind-schedule.

short on fulfilling its EV program goals."[44] California leads the nation with more than 13,000 public charging stations, and New York is far behind with less than 3,000 charging stations statewide.[45]

NYPIRG supports legislation that would promote the build out of EV charging stations. The *Electric Vehicle (EV) Charging Station Expansion Act*, (S.7406-C (Krueger)/A.3179-D (Fahy), would require installation of EV car charging stations when building new residential and commercial buildings with off-street parking or parking lots. This bill will set the State on the right track and effectively accelerate EV charging station infrastructure development which is essential to successfully combat the climate crisis.

While the state has shown leadership in its commitment to electric school buses ("ESBs") – including a play to make the state's 50,000 school buses all electric by 2035, we urge that the state move faster to help schools plan and promote ESB purchases in advance of the 2035 deadline goal. With a useful life of 10-15 years, many districts will make decisions in the next few years that will determine whether they go all electric or not. Additional technical and financial support will result in more ESB purchase orders, which in turn will send clear market signals that the technology is being embraced. Similarly, the state must be more aggressive about replacement of public transit buses with electric vehicles and rapidly remove diesel heavy duty vehicles and equipment due to their climate and public health impacts.

New York should also enact legislation to expand direct-to-consumer sales of ZEVs by manufacturers, which can serve to increase the availability and sales of ZEVs in the State; the State should provide dealer incentives for franchise car dealers to sell ZEVs; and NYSERDA should partner with industry participants and stakeholders to fund consumer engagement activities to increase consumer awareness in ZEVs.[46]

Legislation that would remove the statutory barriers that protect the franchises of legacy combustion-engine vehicle sales in New York and limits EV sales to five (5) direct sales locations has been introduced [S.1763 (Kaminsky/A.4614 (Fahy)]. NYPIRG supports this recommendation and urges that it be included in the Final Scoping Plan.

In addition to our comments above, NYPIRG endorses the joint comments submitted by commenter groups including ALIGN, AGREE, EarthJustice, Environmental Advocates NY, Sierra Club, *et al*. with respect to Buildings, Electric Sector, Gas System Transition, Just Transition, and Transportation, as well as the comments on the waste sector by Beyond Plastics.

Thank you for considering our comments and recommendations.

Sincerely,

Russ Haven, Esq.
General Counsel

Anne Rabe
Environmental Policy Director

Enclosure: 2022 Scorecard

[44] *Ibid*.
[45] U.S. Department of Transportation, *Earth Day 2021 Arrives as U.S. Electric Vehicle Sales Continue to Grow*, 4/21/21. https://www.bts.gov/data-spotlight/electric-vehicle-use-grows.
[46] DSP p. 102.

NYPIRG

June, 2022

Policy Close Up

2022 Scorecard on New York's Progress Toward Its Climate Goals

New York Public Interest Research Group

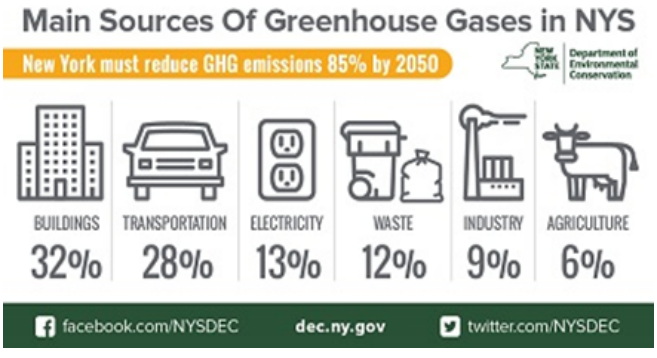
9 Murray Street
Lower Level
New York, NY 10007

NEW YORK STATE CLIMATE ACT
2022 SCORECARD

SUMMARY

New Yorkers have been told that their State will move aggressively to tackle the climate crisis. However, the State has not yet provided annual reporting on the progress that it is making toward those critical goals. Three years ago, the State promised progress. NYPIRG's *Scorecard* reviews publicly available information to chart the State's progress and will continue to do so until New York government produces its own. Findings highlight:

- The State is failing to achieve greenhouse gas emission reduction goals. It is imperative to meet legally mandated goals, guided by a recommended NYS 2022-2050 Climate Action Plan, Annual Progress Reports and Scorecards.
- The State is behind schedule in taking action on the largest greenhouse gas emission sectors of buildings and transportation.
- The State is on track with proposals to expand renewable energy sources, such as wind and solar, energy storage and efficiency, however, the approval and implementation timetable is unclear.



NEW YORK STATE CLIMATE ACT 2022 SCORECARD

Reduce Greenhouse Gas Emissions by 40% in 2030, and by 85% in 2050

Goals: The Climate Leadership and Community Protection Act (CLCPA) established goals to: reduce GHG emissions from 1990 levels by 40% in 2030; 85% in 2050; and to require 100% zero-emission electricity by 2040.

Current Data: The DEC's *2021 Statewide GHG Emissions Report* states New York reduced total statewide greenhouse gas emissions (GHG) by only 6% from 1990 levels.[1] In 2019, statewide gross GHG emissions were 379.43 million metric tons of carbon dioxide equivalent (mmt CO2e) using CLCPA accounting.[2] All this data is based on more than two-year-old information from 2019. NYSERDA's on-line *Clean Energy Dashboard* shows a reduction of approximately 3 million metric tons of CO2e emissions for 2020 and three-quarters of 2021. Neither agency provides clarifying information on how much these GHG reductions contribute to the 2030 GHG reduction goal which underscores the need for a *2022-2050 Climate Action Plan.* The PSC is starting to move forward by facilitating strategic planning for a statewide transition to non-fossil fuel heating systems for utilities.[3]

Improvements: GHG emission reductions must be greatly accelerated across all sectors, particularly from buildings (32% of GHG emissions) and transportation (28% of GHG emissions), and adequate funding must be established.[4] Emissions reductions must exceed 4.25% annually until 2030.
The DEC, DPS, NYSERDA, and PSC should immediately develop and release a comprehensive *2022-2050 Climate Action Plan* with sector-specific milestones, a timetable, and detailed actions, including necessary regulations, programs, legislation and funding, to proactively achieve the CLCPA goals, and annual Scorecards and Progress Reports.

Increasing Renewable Energy for Electricity

Goals: The CLCPA requires: 1) 70% renewable electricity and 40% GHG reduction by 2030; 2) 100% zero-emissions by 2040; and 3) 85 percent GHG reduction by 2050 from 1990 levels. It requires 6,000 megawatt (MW) distributed solar by 2025; 3,000 MW energy storage by 2030; and 9,000 MW offshore wind by 2035.[5]

Current Data: New York obtains 6.8% of its electricity from solar, wind and energy storage plants, ranking 31st in the nation.[6] With the inclusion of hydropower, these combined resources provide 27.4% of the electric load.[7] NYSERDA reports plans for a pipeline of "large-scale renewable generation projects" are expected to result in a 59% increase from 2020 to 2021, including offshore wind and solar incentive programs, noting 2021 was "the busiest construction year for new large-scale renewables in the State's history."[8] In 2020, NYSERDA stated, "The combined renewable generation portfolio of operating, contracted, and awarded projects is expected to generate approximately 63% [of the required 70%] of New York State's projected 2030 electricity demand."[9]

Improvement: Recently awarded projects must move through to energy generation and transmission in a timely manner. The full and timely implementation of NYSERDA's planned renewable energy projects, and additional projects to close the 7% gap, are necessary to achieve the 2030 goal.

Expanding Solar Energy

Goal: The CLCPA goal requires 6,000 MW of distributed rooftop and community solar energy by 2025. In addition, NYSERDA and the DPS developed the *Distributed Solar Roadmap*, a pathway to achieve an expanded target of a total of 10,000 MW of distributed solar deployment by 2030.[10]

Current Data: New York has installed 3,585 MW of solar energy, with 666 MW in 2021 alone.[11] The Solar Energy Industries Association reports the state's solar energy is expected to grow 4,731 MW from 2022 - 2027.[12] NYSERDA reports that New York State is on track to achieve its 6,000 MW distributed solar target by 2025 with nearly 95% of the

projects either completed or at an advanced stage of development.[13] The Roadmap recommends geographical and segment-based incentive blocks for the additional 4,000 MW target, with the balance achieved by solar projects.

Improvements: While projections are promising, in order to meet the CLCPA goal, New York must increase its annual installation to over 800 MW of solar per year to 2025.

Expanding Wind Energy

Goal: The CLCPA establishes a goal of 9,000 MW of wind energy by 2035.

Current Data: New York has installed 2,192 MW of wind energy.[14] NYSERDA procured a "combined portfolio of over 4,186 MW" with an additional 132 MW from the South Fork Wind project in 2021.[15] The agency also reported that, "The combined renewable generation portfolio … is expected to generate approximately 63% [of the required 70%] of New York State's projected 2030 electricity demand."[16] The agency has created a Wind Offshore Master Plan to determine the most responsible pathways for developing offshore wind energy, and it will be implemented in 2022.

Improvements: While projections are promising, the full and timely implementation of these plans are necessary to achieve the goal. New York must install over 485 MW of solar per year until 2035.

Expanding Energy Storage

Goals: The CLCPA requires 1,500 MW storage capacity by 2025, and 3,000 MW by 2030. In January 2022, Governor Hochul announced the state's intention to double the State's energy storage target to at least 6,000 MW by 2030. [17]

Current Data: The Public Service Law Section 74 directed the PSC to establish a statewide energy storage target and the agency adopted a suite of initiatives to achieve these goals. These goals were then codified in the CLCPA. The earlier law requires annual public reports on the achievements and effectiveness of this policy. In 2021, the PSC reported 1,230 MW in energy storage capacity, or about 82% of the 2025 target of 1,500 MW and 41% of the 2030 target of 3,000 MW of energy storage.[18] DPS reports over 12,000 MW of energy storage projects are presently in "interconnection queues, although some of these projects may not be built due to unfavorable project-specific economics and for other reasons." The DPS recommended that "no corrective actions are necessary at this time," and reported that they are working with NYSERDA to update the Energy Storage Roadmap to reflect the expanded goal of 6,000 MW.[19]

Improvements: While projections are promising, interconnection hold ups must be ameliorated and New York must add at least 90 MW of storage capacity per year until 2025.

Improving Energy Efficiency Standards

Goal: In 2018, the Governor set an efficiency target for reduction of energy use in buildings of 185 trillion Btu, with a sub-target of 3% annual electric efficiency savings by 2025. This target was codified in the CLCPA.

Current Data: New York consumed 3,354 trillion British thermal units (Btu) of energy, as of 2020.[20] The American Council for an Energy Efficient Economy ranked the State 5th in energy efficiency in 2020 (2019 data), and due to the pandemic did not rank states in 2021.[21] NYSERDA reports that meeting new energy efficiency targets delivers nearly one-third of the GHG emissions reductions needed to meet the State's climate goal of 40% reduction by 2030, and called on the State's investor-owned utilities to achieve more in both scale and innovation.[22]

Improvements: The State put into effect a voluntary NYStretch Code 2020, however, more needs to be done as the agency stated in its 2020 report that "The State's investor-owned utilities have been called on to achieve more in both scale and innovation through their energy efficiency activities."[23]

[1] Department of Environmental Conservation (DEC) *2021 Statewide GHG Emissions Report,* Pg. 8. https://www.dec.ny.gov/docs/administration_pdf/ghgsumrpt21.pdf
[2] Ibid.
[3] Public Service Commission, News Release, 5/12/2022, https://www3.dps.ny.gov/pscweb/WebFileRoom.nsf/Web/8240969C7564FBD485258840005DBC35/$File/pr22043.pdf?OpenElement
[4] DEC Website as of June 23, 2022, https://www.dec.ny.gov/energy/99223.html
[5] Climate Action Council, *Draft Scoping Plan* Overview, Pg. 150, https://climate.ny.gov/Our-Climate-Act/Draft-Scoping-Plan
[6] American Clean Power website as of 6/23/2022. https://cleanpower.org/wp-content/uploads/2022/05/New-York_clean_energy_factsheet.pdf
[7]NYS Energy Research & Development Agency, *Clean Energy Standard Annual Progress Report: 2020 Compliance Year,* Pg. S-1, https://www.nyserda.ny.gov/.../CES-2020-annual.ashx
[8] Ibid, Pg. S-2 and 17.
[9] Ibid, S-1.
[10] Governor Kathy Hochul, News Release, 4/14/2022, https://www.nyserda.ny.gov/About/Newsroom/2022-Announcements/2022-04-14-Governor-Hochul-Announces-New-Framework-to-Achieve-Ten-Gigawatts-of-Distributed-Solar
[11] Solar Energy Industries Association, *NY Solar Fact Sheet*, https://www.seia.org/sites/default/files/2022-06/New%20York%20Solar-Factsheet-2022-Q2.pdf
[12] Ibid.
[13]NYS Energy Research & Development Agency, *Clean Energy Standard Annual Progress Report: 2020 Compliance Year,* Pg. S-1, https://www.nyserda.ny.gov/CES-2020-annual.ashx
[14] U.S Department of Energy WindExchange, *Wind Energy in New York*, accessed 6/23/2022, https://windexchange.energy.gov/states/ny
[15]NYS Energy Research & Development Agency, *Clean Energy Standard Annual Progress Report: 2020 Compliance Year,* Pg. 7, https://www.nyserda.ny.gov/.../CES-2020-annual.ashx
[16] Ibid, Pg. S-1
[17] Ibid.
[18] NYS Public Service Commission, 4/1/2022, State of Storage Report, https://www.bing.com/search?q=nyserda+annual+state+of+storage+report&cvid=90a3ca5ee5b248a5aa8806b1d8b5c78d&aqs=edge.0.0j69i64l2.7483j0j1&pglt=41&FORM=ANNTA1&PC=DCTS
[19] Ibid.
[20] U.S. Energy Information Administration, https://www.eia.gov/state/data.php?sid=NY
[21] ACEEE, *2020 State Energy Efficiency Scorecard: New York*, https://www.aceee.org/sites/default/files/pdfs/AEEE_ScrSht20_NewYork.pdf and ACEEE *2021 State Energy Efficiency Scorecard Progress Report*, https://www.aceee.org/sites/default/files/pdfs/u2201.pdf
[22]NYS Energy Research & Development Agency, *Clean Energy Standard Annual Progress Report: 2020 Compliance Year,* https://www.nyserda.ny.gov/CES-2020-annual.ashx
[23] Ibid.