

# NYPIRG

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## Policy Close Up

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

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**Summary:** New York State will need to adopt aggressive policies in order to achieve the goals established under its climate law. **To ensure New York meets its climate goals, public accountability will be a key tool.**

The science is clear, and the debate is long over; climate change is real and human activities are at the heart of the problem. According to the United Nations' Intergovernmental Panel on Climate Change (IPCC) October 2018 report, the world needs to limit global warming to 1.5 degrees Celsius, if catastrophic results are to be avoided.<sup>1</sup> Additionally, all nations must aggressively move to a reliance on clean, renewable energy by 2030 in order to limit the warming caused by climate change.

Limiting global warming to 1.5°C will require rapid, far-reaching and unprecedented changes in all aspects of society. Accordingly, New York will need to eliminate its reliance on energy derived from fossil fuel and promote renewable energy in all economic sectors.

New York has set into law ambitious climate goals required by the Climate Leadership and Community Protection Act (CLCPA). This Act established goals to achieve net-zero greenhouse gas emissions by 2050 and 100% carbon-free electricity by 2040.

Unfortunately, New York State has, in the past, had a poor record of meeting climate and energy goals. In order to ensure New York State meets its legally-mandated and ambitious goals, public support will be critical. Releasing annual progress "report cards" to engage the public and assess whether the state is hitting the metrics set in the law will bolster support for the tough policy choices that will be required. This is a crucial accountability measure that should be adopted by New York's Climate Action Council, the Department of Environmental Conservation, and New York State Energy Research & Development Authority (NYSERDA).

However, as yet New York State has not publicly unveiled such an accountability measure. Thus, NYPIRG is providing to the public a scorecard to document where New York stands in respect to its critical climate goals. NYPIRG's "NY Climate Scorecard 2021" breaks down each climate goal established under the CLCPA and uses publicly available information from a variety of sources to evaluate New York's progress.

NYPIRG found that for every requirement established in the CLCPA, New York will have to move aggressively to meet its goals. This means adopting policies that move New York off its reliance on fossil fuels, expand renewables, expand access to public transit and electric vehicles, and increase energy efficiency.

***But to motivate New York to adopt such policies, a scorecard for the public must be made readily available by New York State.*** NYPIRG is only able to access information that is currently 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 to adopt needed climate policies.

## Background:

In June 2019, New York enacted the Climate Leadership and Community Protection Act (CLCPA), which established into law the following climate goals:

- net-zero greenhouse gas emissions by 2050;
- 85% reduction in greenhouse gas emissions from 1990 levels by 2050 and offset the remaining 15% by reforestation, carbon sequestration in soils and other actions.
- 100% carbon-free electricity by 2040;
- 70% of electricity be generated by renewable sources by 2030;
- an efficiency target for reduction of energy use in buildings of 185 trillion British thermal units (tBtu) from 2025 projections;
- 6 gigawatts (GW) of distributed solar by 2025;
- 9 GW of offshore wind by 2035; and,
- 3 GW of energy storage capacity by 2030.

The law also forms *New York State's Climate Action Council*, a 22-member committee that is charged with preparing a "Scoping Plan" to achieve the State's critical climate and energy goals.

In order to ensure New York State meets these ambitious goals, it will be critical to issue annual progress "report cards" to engage the public and assess whether the state is hitting the metrics set in the law. This is a crucial accountability measure that should be adopted by New York's Climate Action Council, the Department of Environmental Conservation, and NYSERDA.

However, until that is accomplished, this Scorecard presents information from a variety of sources (state and federal agencies, research institutions, and more) to demonstrate where New York currently stands in respect to its climate and energy goals and what still needs to be done to achieve them in time.

*There were limitations in what we were able to find and compile. Not all the information available has been updated recently.* For example, the most recent comprehensive greenhouse gas inventory for New York State is dated 2019 and includes data from 1990 to 2016. Additionally, some sources are from non-government entities, which does not mean that the figures are inaccurate, but highlights a need the New York State should be fulfilling.

## Findings:

For each goal established in the CLCPA, New York has much work left to do in order to achieve the goals set out in the law. For example, New York only gets 27% of its electricity from renewable sources, and only 5% of that is solar and wind. To meet New York's goal of 70% renewable electricity by 2030, there will need to be approximately 5% annual growth of renewables.

The same is true of reducing the state's greenhouse gas emissions. According to available data, New York has reduced emissions 13% below 1990 levels, but has goal to reduce emissions 40% below 1990 levels by 2030, and 85% below 1990 levels by 2050. This means New York will need to cut emissions by at least 3% annually to reach its 2030 goals, and 2.25% after that to achieve the 2050 goal.

New York does appear to be on track to meet its solar energy goal, according to information from the Solar Energy Industries Association (SEIA).<sup>2</sup> New York currently has 2.7 GW of solar power, and a goal of 6 GW by 2025. According to the SEIA, in the next 5 years solar is expected to grow by 4.5 GW, which would have New York meet this goal.

According to NYSERDA, the state is on track to meet its energy efficiency goal of a 185 tBtu reduction in energy use (the equivalent of 1.8 million New York homes) from 2025 projections.<sup>3</sup> While this goal was codified in the CLCPA, the goal was first established in 2018 by the Department of Public Service. Prior to that, from NYSERDA's "*New Efficiency: New York*" (April 2018) report: "the 2015 New York State Energy Plan established a 2030 target of a 600 trillion BTU (TBtu) increase in statewide energy efficiency, expressed as a reduction in total primary energy usage in buildings and the industrial sector when compared to the forecasted use of primary energy in 2030."<sup>4</sup> This report established a plan for meet the 2025 and 2030 energy efficiency goals,

There is no question that for New York to meet its climate and energy goals, solar, wind, and geothermal energy will need to grow exponentially, strong energy efficiency measures will need to be adopted statewide, and fossil fuel power plants and other infrastructure will need to be phased out.

Additionally, the resources needed to evaluate where New York stands are challenging for the public to find and difficult for a layperson to understand. There is a multitude of good sources available to find out New York's greenhouse gas emissions, energy portfolio, and energy use, if one knows where to look. For example, NYSERDA has a Clean Energy Dashboard where individuals can review the carbon emission reductions, renewable energy generation, energy savings, and more associated with programs under the Clean Energy Fund, EE Transition, and EE Portfolio.<sup>5</sup>

However, *there is not singular location for the public to find all the information they would need in an easy-to-understand format to assess New York's status meeting its climate goals.* NYSERDA's Clean Energy Dashboard could be used as a model for New York to demonstrate how the state is meeting its CLCPA goals.

### **Recommendation:**

Making climate information readily available to the public in an easy-to-understand format is a crucial tool to ensure New York meets its climate goals. As it currently stands, for a member of the public to try to evaluate New York's progress in meeting its climate goals it would require reviewing a multitude of often complicated, and sometimes dated, resources.

***NYPIRG recommends that New York State creates a public climate scorecard where the public can easily access information about the climate law and view metrics to see where New York state stands.***

Additionally, New York State should incorporate the goals of the CLCPA in its existing resources. For example, NYSERDA's Energy Dashboard offers important information about the progress of various energy programs, but it is not currently easy for the public to discern what the progress in these programs means in regards to the State's climate goals.

By making a climate scorecard for the public and incorporating information on the CLCPA goals in all of New York's climate and energy pages, the public will be enabled to better advocate for the wellbeing of their communities and for New York to adopt policies to meet its climate goals.

Such a tool is especially needed because, according to available information, New York is still far from meeting many of its climate goals. New York will need to adopt aggressive climate and energy policies to meet its targets, and public input will be essential to ensuring this can happen.

## NEW YORK STATE CLIMATE CHANGE SCORECARD

### Reduction of Greenhouse Gas Emissions

Currently: New York has reduced greenhouse gas emissions by 13% since 1990.<sup>6</sup> Electricity emissions have declined 51% since 2005.<sup>7</sup>

Goals: The Climate Leadership and Community Protection Act (CLCPA) has established a goal to reduce greenhouse gas emissions by 85% below 1990 levels, and net-zero emissions, by 2050. There is an intermediary goal of 40% by 2030.

Areas for Improvement: New York must cut emissions by 3% each year to meet its 2030 goal, and 2.25% afterwards to meet the 2050 goal.<sup>8</sup> Emission reductions must be accelerated across all sectors, particularly from transportation and from residential, industrial, and commercial buildings.

### Renewable Energy for Electricity

Currently: New York only gets approximately 5%<sup>9</sup> of its electricity from wind and solar. Including hydropower, the contribution from renewable energy resources to meet the State's electric load was 27% as of 2019.<sup>10</sup>

Goals: The CLCPA establishes goals to achieve 70% renewable energy by 2030 and 100% carbon-free by 2040. There are also specific goals of achieving 6GW of distributed solar by 2025 and 9GW of offshore wind by 2035 (see subsequent sections on solar and wind).

Areas for Improvement: If New York is going to meet its renewable energy goals, solar and wind<sup>11</sup> will need to increase by approximately 5% annually until 2030, and 3% annually afterwards to meet the 2040 goal.<sup>12</sup>

### Energy Efficiency

Currently: New York consumed 3,741 trillion Btu of energy, as of 2017.<sup>13</sup> ACEEE ranked NYS 5th in energy efficiency in 2020.<sup>14</sup>

Goals: In 2018, the Governor set an efficiency target for reduction of energy use in buildings of 185 trillion British thermal units (tBtu) from 2025 projections, with a sub-target of 3% annual electric efficiency savings by 2025.<sup>15</sup> This target was codified in the CLCPA.

Areas for Improvement: The state stayed 5<sup>th</sup> in ranking in the ACEEE annual scorecard from 2019 to 2020, scoring a half point less than what was earned in 2019. The state recently put into effect NYStretch Code 2020, which is a voluntary, locally adoptable energy efficiency code program.<sup>16</sup> This is good, but much more must be done to mandate energy efficiency retrofits statewide and to ensure new construction is energy efficient from the outset.

### Solar – Rooftop and Community Solar (i.e. Distributed) and Grid-Scale Solar

Currently: New York currently has 2.7 gigawatts (GW) of distributed solar.<sup>17</sup>

Goals: The CLCPA establishes a goal to achieve 6 GW of distributed solar by 2025.

Areas for Improvement: To meet the goal of 6 GW by 2025, rooftop and community solar will need to increase by 0.8 GW annually. According to the Solar Energy Industries Association, solar is *expected* to grow 4.5 GW over the next five years, which should get New York to meet the CLCPA goal.<sup>18</sup>

### Offshore Wind and Land Based Wind

Currently: New York currently has approximately 2 GW of land-based wind energy.<sup>19</sup> There is no operating offshore wind serving New York yet, but 3.3 GW are in the works.<sup>20</sup>

Goals: The CLCPA establishes a goal of 9 GW of offshore wind energy by 2035. In order to meet the 70% by 2030 goal,

NYS will likely have to more than double the land-based wind.

Areas for Improvements: Land based wind needs to increase by 200-400 MW per year to meet the 2030 goal. NY has two offshore wind projects that will total 3.3 GW, making up one-third of the 9 GW offshore wind goal. Offshore wind energy will need to increase by an average of 750 MW annually to meet the 2035 goal.

## Energy Storage

Currently: New York currently has 62.2 megawatts (MW) (or 0.06 GW) of energy storage capacity.<sup>21</sup>

Goals: The CLCPA establishes a goal to achieve 3 GW of storage capacity by 2030. Additionally, New York has a goal to achieve 1.5 GW by 2025.<sup>22</sup>

Areas for Improvement: New York currently has a roadmap to achieve its 1.5 GW energy storage goal by 2025.<sup>23</sup> To achieve the 2030 goal, energy storage capacity must increase by 0.3 GW annually. Funding has been awarded by NYSERDA for several energy storage projects across the state, including 80 MW in the Hudson Valley.<sup>24</sup> Con Edison has signed a contract to build a 100 MW storage system in Astoria Queens.<sup>25</sup>

## Endnotes

<sup>1</sup> International Panel on Climate Change, "Global Warming of 1.5°C," October, 2018, [https://report.ipcc.ch/sr15/pdf/sr15\\_spm\\_final.pdf](https://report.ipcc.ch/sr15/pdf/sr15_spm_final.pdf).

<sup>2</sup> Solar Energy Industries Association, "New York Solar," 2020, <https://www.seia.org/state-solar-policy/new-york-solar>

<sup>3</sup> NYSERDA, "New Efficiency: New York," April 2018, <https://www.nyserdera.ny.gov/about/publications/new-efficiency>.

<sup>4</sup> Ibid.

<sup>5</sup> NYSERDA, Clean Energy Dashboard, accessed April 25, 2021, <https://www.nyserdera.ny.gov/Researchers-and-Policymakers/Clean-Energy-Dashboard/View-the-Dashboard>.

<sup>6</sup> NYSERDA, "New York State Greenhouse Gas Inventory: 1990-2016," July 2019, <https://www.nyserdera.ny.gov/About/Publications/EA-Reports-and-Studies/Greenhouse-Gas-Inventory>.

<sup>7</sup> NYSERDA, "New York State Greenhouse Gas Inventory: 1990-2016," July 2019, p. S-10, <https://www.nyserdera.ny.gov/About/Publications/EA-Reports-and-Studies/Greenhouse-Gas-Inventory>.

<sup>8</sup> The most recent GHG data in New York is based upon an analysis of data from 1990-2016, which is now five years old. It is possible GHG emissions have been reduced further, but the information is not publicly available.

<sup>9</sup> Solar Energy Industries Association, "Solar State by State," 2019, <https://www.seia.org/states-map> and American Wind Energy Association, "Wind Facts at a Glance," 2019, <https://www.awea.org/wind-101/basics-of-wind-energy/wind-facts-at-a-glance>.

<sup>10</sup> NYSERDA, "Clean Energy Standard Annual Progress Report: 2019 Compliance Year," January 2021, p. ES-1

<sup>11</sup> This was calculated based on the 27% New York currently gets from solar, wind, and hydro. However, NYPIRG feels that hydro should not be expanded to meet New York's renewable energy goals given the destructive impacts new hydro would have on the environment.

<sup>12</sup> From NYSERDA's "Clean Energy Standard Annual Progress Report: 2019 Compliance Year": "As of January 2021, New York State has a contracted pipeline of large-scale renewable generation projects that are expected to deliver 34,000 gigawatt hours (GWh) annually, with additional contributions expected from distributed energy resources."

<sup>13</sup> "2017 New York State Energy Fast Facts," NYSERDA, January 2021, <https://www.nyserdera.ny.gov/About/Publications/EA-Reports-and-Studies/Patterns-and-Trends>

<sup>14</sup> ACEEE, "2020 State Energy Efficiency Scorecard: New York," [https://www.aceee.org/sites/default/files/pdfs/ACEEE\\_ScrSht20\\_NewYork.pdf](https://www.aceee.org/sites/default/files/pdfs/ACEEE_ScrSht20_NewYork.pdf).

<sup>15</sup> Governor Cuomo, "Governor Cuomo Announces Dramatic Increase in Energy Efficiency and Energy Storage Targets to Combat Climate Change," December 2018, <https://www.governor.ny.gov/news/governor-cuomo-announces-dramatic-increase-energy-efficiency-and-energy-storage-targets-combat>.

<sup>16</sup> ACEEE, "2020 State Energy Efficiency Scorecard: New York," [https://www.aceee.org/sites/default/files/pdfs/ACEEE\\_ScrSht20\\_NewYork.pdf](https://www.aceee.org/sites/default/files/pdfs/ACEEE_ScrSht20_NewYork.pdf).

<sup>17</sup> Solar Energy Industries Association, "New York Solar," 2020, <https://www.seia.org/state-solar-policy/new-york-solar>.

<sup>18</sup> Ibid.

<sup>19</sup> U.S Department of Energy WindExchange, "Wind Energy in New York," accessed April 10, 2021, <https://windexchange.energy.gov/states/ny>.

<sup>20</sup> "New York State to get 3.3GW in offshore wind capacity," Global Construction Review, January 2021, <https://www.globalconstructionreview.com/news/new-york-state-get-33gw-offshore-wind-capacity/>.

<sup>21</sup> Emily Holbrook, "Lower Hudson Valley Gets 80MW Energy Storage Portfolio After NYSERDA Incentive Award," Environment + Energy Leader, February 2020, <https://www.environmentalleader.com/2020/02/lower-hudson-valley-gets-80mw-energy-storage-portfolio-after-nyserdera-incentive-award/>.

<sup>22</sup> "Energy Storage," NYSERDA, <https://www.nyserdera.ny.gov/All-Programs/Programs/Energy-Storage>.

<sup>23</sup> "Energy Storage Roadmap," PSC and NYSERDA, June 2018, <https://www.nyserdera.ny.gov/All-Programs/Programs/Energy-Storage>.

<sup>24</sup> Emily Holbrook, "Lower Hudson Valley Gets 80MW Energy Storage Portfolio After NYSERDA Incentive Award," Environment + Energy Leader, February 2020, <https://www.environmentalleader.com/2020/02/lower-hudson-valley-gets-80mw-energy-storage-portfolio-after-nyserdera-incentive-award/>.

<sup>25</sup> Jeff St. John, "Con Edison Contracts Its Biggest Battery to Date in New York City," December 2020, <https://www.greentechmedia.com/articles/read/con-edison-contracts-new-yorks-biggest-battery-to-date>.