VOTE SOLAR

TESTIMONY OF SEAN GARREN, NORTHEAST SENIOR DIRECTOR OF VOTE SOLAR

JOINT HEARING OF THE SENATE MAJORITY AND THE ENVIRONMENTAL CONSERVATION COMMITTEE ON CLIMATE AND COMMUNITY PROTECTION ACT

WRITTEN TESTIMONY

FEBRUARY 14, 2019

Thank you for the opportunity to submit written testimony on the Climate and Community Protection Act.

This testimony is submitted on behalf of Sean Garren, the Northeast Senior Director for Vote Solar.

Vote Solar is not-for-profit advocacy organization that since 2002 has been working to make solar affordable and accessible to more Americans. Vote Solar works at the state level all across the country to support the policies and programs needed to repower our grid with clean energy.

Climate Targets Are Critical, but Near-Term Solar Targets Will Drive Direct Benefits to Communities and Private Industry

Along with the support of partners from the renewable energy industry, leading environmental organizations, academic institutions, social justice organizations, and advocates for solar energy, we have collaborated on the Million Solar Strong Campaign (https://www.solarstrongny.org/), an effort to set a bold new goal of powering a million households with solar and serve 100,000 low-income families with cost-saving solar power by the year 2023. This near-term target will have immediate positive impacts for communities on the ground and the solar industry, both of which will be critical to the long term battle against climate change. More than 40 New York State legislators have already endorsed this proposal (https://www.solarstrongny.org/voices/).

Our campaign is grateful to see that the Senate, along with the Assembly and Governor Andrew Cuomo, are committed to bold action to build a clean energy economy, address climate change and protect vulnerable communities. Recently Governor Cuomo committed to creating a carbon free electric system by 2040, increasing the state's reliance on renewable energy for its electricity needs, and expanding the NY-Sun program to support 6 gigawatts of distributed solar by 2025 as part of his "Green New Deal" plan. This commitment would fulfill our campaign's goal of powering one million households with solar as well as encouraging the further development of large-scale renewable resources, but legislative action is still required to support this effort.

VOTE SOLAR

We are also supportive of the goals and intent of the Climate and Community Protection Act (CCPA), and thank the Senate for taking this important issue up in earnest. As we aim to fight global climate change and build a long-term, sustainable energy system, it is imperative that we start as quickly as possible. It will take the Legislature working with Governor Cuomo to swiftly enact strong climate and clean energy legislation to set New York on the right path.

Near-Term Targets and Key Solar Programs Can Put Customers and Communities at the Center of Our Energy Economy

Ensuring that progress is made in the next five years will be critical to both realizing these goals and making sure families, businesses and communities see immediate and tangible benefits as the state transitions to a clean energy future. Furthermore, New York's transition to clean energy must transcend the status quo and ensure that every New Yorker has access to its benefits. This is particularly true for communities of color and low-income families who disproportionately bear the health, environmental, and economic burdens of our fossil fuel-based energy system and its climate impacts while seeing little of the economic benefits from that system. It is crucial that final legislation include serving at least 100,000 low-income households directly with cost-saving solar by 2025 to make this a more just transition and move towards equity in our energy economy.

Therefore, we recommend that the Legislature work with the Governor's Office to enact legislation that includes the following:

1. Codification of Distributed Solar Goal

We strongly recommend the Legislature codify the standard of 6 gigawatts (GW) of distributed solar by 2025; enough to power 1 million households, including a goal of ensuring 20 percent of new residential-serving solar serves low-income (LI) customers, which we estimate will serve 100,000 families.

2. Additional Direction to State Agencies

We further urge the Legislature to direct the PSC to account for solar and climate pollution reduction targets in its regulatory decisions. While the PSC has a broad mandate, given the magnitude of the climate crisis, the Legislature should codify that promoting renewable energy and meeting carbon reduction targets are part of its core mission and these goals should guide decisions on determining the full, accurate and avoided impacts of fossil fuels in its regulatory dockets.

Furthermore, we urge the Legislature to give similar additional direction to the State's other regulatory authorities, such as the New York State Energy Research Authority (NYSERDA), the New York Power Authority (NYPA), the Long Island Power Authority (LIPA) and the Office of General Services to account for these goals in their regulatory and programmatic decisions.

VOTE SOLAR

With respect to the Governor's proposed language in the budget directing the PSC to commence or modify a proceeding to establish a clean energy program to meet 70 percent of statewide electrical demand with renewable energy sources, we strongly recommend that the Legislature adopt this language and direct NYSERDA to hold and announce quickly procurements for large scale renewable energy annually, through 2030.

In addition, the Legislature should require and direct the PSC to set minimum annual percentage target requirements for load serving entities on a 10-year rolling basis to give increased visibility into the renewable energy needs of meeting the overall clean energy objective. As part of this goal, the Legislature should require utilities to purchase 2 percent of load through long-term, bundled power purchase agreements, which has proven to be one of the most cost-effective ways to promote large scale renewable energy development across the country. This approach was found to produce significant ratepayer savings when compared to other options in a paper entitled, "Large Scale Renewable Energy Development in New York: Options and Assessment" published by NYSERDA in June 2015.

3. Equitable Clean Energy Funding/Mobilizing the NY Green Bank

Within two years, require at least 40 percent of uncommitted climate and clean energy funding from the Clean Energy Fund, Regional Greenhouse Gas Initiative and New York Green Bank go to programs serving low- and moderate-income (LMI) customers or communities or front-line communities dealing with the negative impacts of environmental injustice.

We further recommend that the Legislature codify the New York Green Bank (NYGB) and clarify its mission to include financing for equitable deployment of clean energy, such as subsidizing financing for low and moderate income (LMI) customers and community-owned or -controlled projects serving or in LMI communities.

4. Low-Income Stakeholder Engagement

We further recommend that the Legislature create a stakeholder advisory board including and providing direction and recommendations to the PSC, NYSERDA and the NYGB on how to expand access to solar and other clean energy technologies and programs. This advisory board, including and staffed by these agencies, would be tasked with the creation of a roadmap for expanding the direct benefits of solar going to low-income communities and achieving the 100,000 solar low-income households goal. This advisory board would consist of these agencies as well as representatives of low-income and environmental justice communities, the clean energy industries and the environmental community.

5. Accountability

Lastly, we recommend the Legislature direct NYSERDA to issue an annual report to the Governor, the PSC and the Legislature detailing: 1) the state of the solar sector and other clean energy industries, including projected growth and a breakdown of different geographic, project and customer types, including low-income customers; and 2) the state of state clean energy funding, with a specific accounting of funds going directly to serve LMI families and

communities.

Thank you for the opportunity to submit written testimony. We believe these amendments will strengthen the Climate and Community Protection Act or any other legislative vehicle dealing with climate and clean energy, and solidly set the state on the path to encouraging renewable energy growth. We look forward to working with you in the coming weeks to enact legislation and then implement the necessary policies to protect future generations of New Yorkers.

For more information contact:

Sean Garren, Senior Director, Vote Solar (sean@votesolar.org)

TESTIMONY OF DAVID GAHL, SENIOR DIRECTOR OF STATE AFFAIRS, NORTHEAST SOLAR ENERGY INDUSTRIES ASSOCIATION

SENATE STANDING COMMITTEE ON ENVIRONMENTAL CONSERVATION

WRITTEN TESTIMONY ON THE CLIMATE AND COMMUNITY PROTECTION ACT (S.2992/A.3876)

FEBRUARY 12, 2019

This testimony is submitted on behalf of David Gahl, the Senior Director of State Affairs for the Solar Energy Industries Association (SEIA). SEIA is the national trade association of the U.S. solar energy industry, which now employs more than 260,000 Americans. Through advocacy and education, SEIA is building a strong solar industry to power America. SEIA works with its 1,000-member companies to build jobs and diversity, champion the use of cost-competitive solar in America, remove market barriers and educate the public on the benefits of solar energy.

SEIZE THE MOMENT

SEIA urges the Executive and Legislative branches to work together this year to pass meaningful and reasonable energy legislation that encourages the growth of the solar industry. Final legislation should include near-term milestones for solar that allow the state to reach its long-term clean energy goals.

In 2018, the solar industry employed nearly 10,000 workers in New York, making it the fourth largest state in the nation for solar jobs. Sustaining this growth and market momentum can be achieved by enacting legislation that codifies the state's short-term solar goals, requires all renewable resources to provide a significant portion of the state's electricity needs, and ensures that solar energy is fairly valued by regulators.

BACKGROUND

SEIA, along with the support of partners from the renewable energy industry, leading environmental organizations, academic institutions, social justice organizations, and advocates for solar energy, have collaborated on the Million Solar Strong Campaign (https://www.solarstrongny.org/), an effort to set a bold new goal of powering a million households with solar by the year 2023. More than 40 New York State legislators have already endorsed this proposal (https://www.solarstrongny.org/voices/).

Our campaign is grateful to see that Governor Andrew Cuomo recently committed to creating a carbon-free electric system by 2040, increasing the state's reliance on renewable energy for its electricity needs, and expanding the NY-Sun program to support 6 gigawatts of distributed solar

by 2025. This commitment would fulfill our campaign's goal of powering one million households with solar as well as encouraging the further development of large-scale renewable resources.

The Cuomo Administration has proposed legislation in the SFY 2019-20 Executive Budget to codify a 2040 carbon-free electricity target, establish or continue a Public Service Commission (PSC) proceeding to obtain 70 percent of the state's electricity from renewable resources by 2030, and create an administrative body to consider other regulatory measures to reduce the pollution causing climate change (S.1508/A.2008, Part X). This first-of-its-kind proposal from the Executive Branch is a welcome development and represents a major step toward enacting meaningful energy legislation this year.

Furthermore, for the past several years the New York State Assembly has passed landmark legislation that would reduce the emissions responsible for climate change, encourage the growth of renewable energy - including solar - and help set New York on the path to a more sustainable energy future. This legislation has been reintroduced in the Senate and the Assembly in 2019.

SOLAR INDUSTRY RECOMMENDATIONS

Ensuring that progress is made in the next five years will be critical to both realizing New York's overall energy objectives and making sure families, businesses and communities see immediate and tangible benefits as the state transitions to a clean energy future.

Furthermore, New York's transition to clean energy must transcend the status quo and ensure that every New Yorker has access to its benefits. This is particularly true for communities of color and low-income families who disproportionately bear the health, environmental, and economic burdens of our fossil fuel-based energy system and its climate impacts while seeing little of the economic benefits from that system. It is crucial that final legislation include serving at least 100,000 low-income households directly with cost-saving solar by 2025 to make this a more just transition and move towards equity in our energy economy.

Therefore, SEIA recommends that the Legislature work with the Governor's Office to ensure that any final legislation includes the following:

1. Codification of Distributed Solar Goal

We strongly recommend the Legislature codify the standard of 6 gigawatts (GW) of distributed solar by 2025; enough to power 1 million households, including a goal of ensuring 20 percent of new residential-serving solar serves low-income (LI) customers, which we estimate will serve 100,000 families.

2. Additional Direction to State Agencies

We further urge the Legislature to direct the PSC to account for solar and climate pollution reduction targets in its regulatory decisions. While the PSC has a broad mandate, given the magnitude of the climate crisis, the Legislature should codify that promoting

renewable energy and meeting carbon reduction targets are part of its core mission and these goals should guide decisions on determining the full, accurate and avoided impacts of fossil fuels in its regulatory dockets.

Furthermore, we urge the Legislature to give similar additional direction to the State's other regulatory authorities, such as the New York State Energy Research Authority (NYSERDA), the New York Power Authority (NYPA), the Long Island Power Authority (LIPA) and the Office of General Services to account for these goals in their regulatory and programmatic decisions.

SEIA supports the Governor's proposal directing the PSC to commence or modify a proceeding to establish a clean energy program to meet 70 percent of statewide electrical demand with renewable energy sources. Furthermore, we strongly recommend that the Legislature advocate for final legislation to include provisions directing NYSERDA to hold and announce procurements for large scale renewable energy annually, through 2030. In addition, the Legislature should require and direct the PSC to set minimum annual percentage target requirements for load serving entities on a 10-year rolling basis to give increased visibility into the renewable energy needs of meeting the overall clean energy objective.

As part of this goal, the Legislature should require utilities to purchase 2 percent of load through long-term, bundled power purchase agreements, which has proven to be one of the most cost-effective ways to promote large scale renewable energy development across the country. This approach was found to produce significant ratepayer savings when compared to other options in a paper entitled, "Large Scale Renewable Energy Development in New York: Options and Assessment" published by NYSERDA in June 2015.

3. Equitable Clean Energy Funding/Mobilizing the NY Green Bank

Within two years, require at least 40 percent of uncommitted climate and clean energy funding from the Clean Energy Fund, Regional Greenhouse Gas Initiative and New York Green Bank go to programs serving low- and moderate-income (LMI) customers or communities. This is an equitable share of funding based on the state's population.

We further recommend that the Legislature codify the New York Green Bank (NYGB) and clarifies its mission includes financing for equitable deployment of clean energy, such as subsidizing financing for low and moderate income (LMI) customers and community-owned or -controlled projects serving or in LMI communities.

4. Low-Income Stakeholder Engagement

We further recommend that the Legislature create a stakeholder advisory board to provide direction and recommendations to the PSC, NYSERDA and the NYGB on how to expand access to solar and other clean energy technologies and programs. This advisory board and these agencies would be tasked with the creation of a roadmap for expanding the direct benefits of solar going to low-income communities and achieving the 100,000 solar low-income households goal. This advisory board would consist of these agencies as well as

representatives of low-income and environmental justice communities, the clean energy industries and the environmental community.

5. Accountability

Lastly, we recommend the Legislature direct NYSERDA to issue an annual report to the Governor, the PSC and the Legislature detailing: 1) the state of the solar sector and other clean energy industries, including projected growth and a breakdown of different geographic, project and customer types, including low-income customers; and 2) the state of state clean energy funding, with a specific accounting of funds going directly to serve LMI families and communities.

Thank you for the opportunity to submit written testimony on S.2992. We look forward to working with you in the coming weeks to enact legislation and then implement the necessary policies to ensure the growth of the solar industry in New York.

For more information contact:

David Gahl, Senior Director, Solar Energy Industries Association (dgahl@seia.org)
James Walsh, Partner, Manatt, Phelps & Phillips (jwalsh@manatt.com)

TESTIMONY OF SHYAM MEHTA, EXECUTIVE DIRECTOR OF NYSEIA

JOINT HEARING OF THE SENATE MAJORITY AND THE ENVIRONMENTAL CONSERVATION COMMITTEE ON CLIMATE AND COMMUNITY PROTECTION ACT (S7971A)

FEBRUARY 14, 2019

Good morning. My name is Shyam Mehta. I am the Executive Director of the New York Solar Energy Industries Association, also known as NYSEIA. I'd like to thank Chairman Kaminsky and members of the Committee for the opportunity to present the solar industry's perspective on the Climate and Community Protection Act (Senate Bill S7971A). NYSEIA is a not-for-profit trade association that represents over one hundred solar energy businesses across New York, from all sectors of the industry. Our mission is to achieve significant, long-term and sustainable growth in solar energy deployment, thus accelerating our state's transition to a clean energy economy while creating well-paying jobs and economic prosperity for the people of New York.

1. Rapid Statewide Decarbonization Will Require Significant Changes to New York's Electricity Generation Mix, and Our Options are Limited

Recognizing that climate change poses severe existential and economic risks and the limited time frame in which to address them, NYSEIA fully supports the intent and goals of the Climate and Community Protection Act (CCPA), and thanks the Senate for taking up this issue in earnest. In particular, we applaud the CCPA's aggressive decarbonization timeline and the inclusion of intermediate goals to track progress and maintain accountability.

To eliminate emissions, it is useful to first identify their sources. In New York State, electricity generation and imports made up 17 percent of total statewide CO_2 emissions in 2015[1], after transportation (33 percent - and remember, electric vehicles cannot truly be clean if they are charging from a dirty grid) and on-site combustion (31 percent). A full 41 percent of electricity produced in New York comes from burning fossil fuels like oil, coal and natural gas, and that number increases to 70 percent downstate[2], which lacks the hydropower resources of upstate and where wind power is difficult to site. To decarbonize our electric grid by 2050, therefore, will require dramatically increasing the share of renewable technologies in a relatively short period of time.

To compound the issue, the state's clean energy technology options going forward are limited. We are not blessed with abundant geothermal resources and hydropower potential in our state has been largely tapped out. Going forward, the onus thus lies on solar and wind power to lead New York towards an emissions-free energy future.

[1] "New York State Greenhouse Gas Inventory: 1990–2015", NYSERDA. https://www.nyserda.ny.gov/-/media/Files/EDPPP/Energy-Prices/Energy-Statistics/greenhouse-gas-inventory.pdf

[2] "2018 Power Trends", NYISO. https://www.nyiso.com/documents/20142/2223020/2018-Power-Trends.pdf/4cd3a2a6-838a-bb54-f631-8982a7bdfa7a

2. For Solar to Play a Meaningful Role in an Emissions-Free Energy Future, Dramatically More Must be Deployed Than Has Been So Far

First, it is important to recognize the state's solid policy foundations for solar, which are due to the efforts of the Legislature and the Cuomo administration. The near-term path for solar growth is solid, thanks to our state's commitments and policy support from NYSERDA and the Public Service Commission. The solar industry is very heartened by the policy direction that the Senate has set under its new leadership, and we are eager to partner with you on ambitious clean energy efforts such as this bill. But let's put that progress into perspective. Although the last five years have seen a significant increase in solar deployment, solar made up just over 1 percent of New York's energy mix at the end of 2017[3]. Early data suggests that this increased by only 0.3 percent over the course of 2018[4].

For solar energy to play any meaningful role towards the achievement of a carbon-free electricity sector and economy, it will not suffice to increase deployments at incremental or even moderate rates. To achieve a contribution of even 10 percent by 2030 will require deploying almost ten gigawatts of solar in the next decade - more than seven times the amount that has been installed to date. In other words, for solar to play any meaningful role in a carbon-free economy will require deploying an order of magnitude more than we have seen to date.

3. Upping Our Solar Deployment Rate to Required Levels Will Require Codification of Solar-Specific Targets and Coordinated Action to Ensure Cost-Competitiveness

Recognizing that a dramatic increase in solar deployment will be required to realize the goal of a carbon-free electric sector over the next few decades, NYSEIA urges the Legislature to adopt a new, robust solar-specific goal that dramatically expands solar access and creates a stable, predictable market for solar employment and investment. Just like the CCPA's targets for greenhouse gas emissions, the goal should be enforceable and include interim targets to ensure progress. Governor Cuomo's commitment to doubling distributed solar deployment to 6 gigawatts by 2025, which NYSEIA applauds, is a step in such a direction, as is the Million Solar Strong campaign's goal of powering a million NY homes with solar by 2023. It is not a coincidence that many states that have consistently led the country in solar deployment, such as Massachusetts, New Jersey, Arizona and Nevada, all have solar carve-outs as part of their renewable energy portfolio standards.

Finally, while codification of solar-specific targets, in the short, medium and long-term, is absolutely necessary to drive our transition to a clean energy economy, it is by no means sufficient. Ultimately, the growth of solar adoption will depend on how affordable it is compared to other options, and any measures, even if well-intentioned, that increase solar project costs risk slowing down deployment.

Perhaps more than any other single issue this session, NYSEIA member companies are very concerned that efforts to expand Prevailing Wage requirements could lead to a dramatic slowdown in the industry and kill solar projects in every corner of the state. To put this issue in perspective, a typical solar project earns a rate of return somewhere in the 8-12 percent range. In a survey that NYSEIA will unveil shortly, our members report that Prevailing Wage requirements have historically added between 15 and 25 percent to overall project costs – meaning that a large number of solar projects would be in the red and the state's clean energy and climate goals would be undermined.

Our member companies currently pay a very competitive wage (and many are hiring), and it is important to note that larger solar projects and those with municipal offtakers are already subject to Prevailing Wage requirements. If these

[3] "2018 Power Trends", NYISO. https://www.nyiso.com/documents/20142/2223020/2018-Power-Trends.pdf/4cd3a2a6-838a-bb54-f631-8982a7bdfa7a

[4] "Interconnection Queue Summary", DPS. http://www3.dps.ny.gov/W/PSCWeb.nsf/All/286D2C179E9A5A8385257FBF003F1F7E

requirements must be expanded, we strongly urge this Committee to consider ways to mitigate the impact, such as increasing NYSERDA MW-Block funds, exempting certain classes of solar projects and/or relieving solar of administrative burdens that come with the Prevailing Wage regime. NYSEIA would appreciate the opportunity to continue to dialogue with you on this critical issue.

NYSEIA thanks the Environmental Conservation Committee for considering these comments. If we can be a resource or provide additional information, please do not hesitate to contact Shyam Mehta at shyam@nyseia.org.

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T E S T I M O N Y

By

The ALLIANCE FOR CLEAN ENERGY - NEW YORK
Anne Reynolds
Executive Director

Senate Standing Committee on Environmental Conservation
Public Hearing to Discuss the Climate and Community Protection Act

February 12, 2019

On behalf of the Board of Directors and member companies and organizations of the Alliance for Clean Energy New York (ACE NY), listed below, we are grateful for the opportunity to share our comments regarding the Climate and Community Protection Act (S.2992/A.3876) ("CCPA").

I want to thank the Committee for your leadership on climate change and the transition to a clean energy economy, as represented by the CCPA.

ACE NY member companies are engaged in renewable electricity generation and electric system efficiency. As such, these comments are going to largely focus on the electricity portions of the CCPA, and less on the economy-wide greenhouse gas emissions (GHG) reduction targets – i.e. for building heating or transportation – although we do agree that reducing GHG emissions from all sources is important. It is important to note, though, that the most promising and commercially-ready route to reducing emissions from transportation and heating is to electrify these sectors. If you do that – use electric vehicles and high-efficiency electric heating – you do need more clean and renewable electricity generation. So, though we focus on renewable electricity, progress in this sector is absolutely critical to progress in the other two.

Modern and clean renewable electricity technologies—like wind and solar power—lie firmly at the intersection of progressive policy and economic progress. When we transition to a clean energy economy, we will reduce air pollution, create in-state jobs, keep more energy dollars in-state, use electricity more efficiently, modernize the grid and the power plant fleet, and address climate change.

My main message for you today is: To make any real and meaningful progress combating climate change, we need to build many more renewable energy projects, and soon. The strongest legislation on climate change would be a bill that establishes an ambitious renewable electricity mandate in law; directs the State in how and when to implement that mandate; and includes policies that help projects – like wind and solar – get built and begin to start generating pollution-free power in the near-term.

Second, I want to highlight that New York State is the only state that has had a renewable energy standard for electricity that is not established in law, and has for twelve years. Both the CCPA and the governor's Climate Leadership Act (Part X of the Executive Budget) would establish the renewable electricity standard in law, which would be excellent progress.

The main difference between the CCPA and the Governor's proposal, in terms of the electricity portion, is that Part X includes 70% renewable electricity by 2030 and the CCPA includes 50% by 2030. Since we have the 50% standard now (via Commission Order), and because it is a more aggressive target, we enthusiastically support the 70% by 2030 mandate.

How could NYS get to 70% by 2030?

In developing the 50% Clean Energy Standard (CES), New York did a CES Cost Study that predicted that the amount of new renewable generation needed to achieve 50% was 29.2 million megawatt-hours (MWhr) in 2030. This would amount to very roughly 22% of 2030 electricity demand, while the renewables we already have – assuming we could keep them – would provide roughly 28%. Energy efficiency would significantly reduce the total electricity demand that is otherwise projected for 2030. Since that time, the Public Service Commission has established accelerated energy efficiency (EE) goals. Including those EE goals in this legislation would significantly strengthen the state's energy efficiency program. Further, keeping the renewable energy projects we have, and keeping their clean energy in-state, remains a priority. Senate Bill 23, sponsored by Senator Parker, would achieve that goal.

The CES Cost Study predicted that half of the 29.2 million MWhr would come from new land-based wind, 15% from utility-scale solar, 9% from hydropower, 4% from bio sources, 14% from offshore wind, and 7% from imports. This is just a modelled prediction; the actual results will depend on how the costs come down for different technologies over time and how these technologies and individual proposed projects compete with each other to win contracts from NYSERDA.

(*In the table below, the alternative scenarios are for illustrative purposes only, and do NOT represent modelled results based on cost differences. Instead, in each alternative the offshore wind or hydro MW were added, and the other technologies were reduced proportionally)*

Technology	I. 2030 Cost Study Projected Mix (%) of Tier 1	II. Cost Study w/ 2400 MW OSW (%)	III. Cost Study w/ 2400 MW OSW & 1000 MW Hydro Imports	MW of each Technology in Scenario I	MW of each Technology in Scenario III
Land Based Wind	50%	35%	25%	4,483	1,828
Utility Scale Solar	15%	11%	9%	3,855	1,905
Hydropower	9%	7%	5%	600	245
Bioenergy/Other	4%	3%	2%	189	77
Offshore Wind	14%	40%	41%	1,000	2,400
Imports	7%	5%	19%	516	1,000

Since that time, the Commission adopted an offshore wind tier of the CES of 2,400 MW, and more recently (in the 2019 State of the State speech), the governor announced a proposed goal of 9,000 MW of offshore wind. To put this aggressive goal in context, 9,000 MW of offshore wind would roughly provide 26% of total 2030 electricity demand, assuming a capacity factor of 44% for offshore wind. The increment above the current goal of 2,400 MW is roughly 19% of 2030 electricity demand. Thus, the ambitious 9,000 goal – when it is achieved – would be nearly (but not quite) enough to get New York State from 50% renewables to 70% renewables. (Note that the Governor's proposal was 70% by 2030, but the offshore wind proposal was 9,000 MW by 2035.)

The Estimated Generation Produced by Specified Megawatts of Offshore Wind		
(MW)	**MWhr**	**% of Total 2030 Electricity Demand**
2,400	9,636,000	7%
6,600	26,499,000	19%
9,000	36,135,000	26%
Assumed a 2030 Load of 140,992,000 MWhrs and an Offshore Wind capacity factor of 44%.		

I present this data to make two points. First, reaching 70% by 2030 is aggressive, ambitious, and achievable. It will depend on the State's continued commitment to procurement of renewable energy and the developers' ability to get projects through the permitting, siting, and interconnection processes, which are all lengthy and comprehensive.

Second, getting to 70% requires that New York achieve a lot of everything. This means aggressive energy efficiency; a flourishing of distributed renewables and storage; keeping the renewables we have; and building a lot more new renewables. And the renewables need to be diverse: land-based wind, offshore wind, solar, hydropower, fuel cells, and sustainable biomass. We note that the CCPA and the Climate Leadership Act (CLA) have slightly different definitions of eligible technologies. We strongly support keeping the definition consistent with what the Commission has established for the Clean Energy Standard, which would include wind, solar, and hydro smaller than 50 MW, plus fuel cells, and also biomass subject to strict sustainability criteria. These are all clean end efficient technologies that can help New York reach its goals and in the interest of consistency and stability, the legislation should adhere to the CES eligibility criterial

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As the Committee discusses legislation to address global warming, we urge you to consider elements that will strengthen the near-term investment climate in New York. While the member companies and organizations of ACE NY welcome a standard that goes beyond 50% renewable electricity, specific actions that help to get clean energy projects financed and constructed in the next three to five years are needed. This will build the momentum necessary to achieve first 50% and then 70% and 100% renewable electricity. Without a near-term acceleration in project construction, New York is in danger of not meeting its ambitious goals.

We respectfully ask you to consider including the following ten elements in any global warming legislation to improve the near-term commercial opportunities for renewables developers and energy efficiency companies and expand clean energy jobs in New York State:
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1. **Establish these nation-leading clean energy goals in law and establish a clear pathway for achievement**. To ensure that these policies remain intact and administered over time, codify 70% renewable electricity by 2030 and establish specific ramp rates that will achieve this requirement (i.e. percentage goals in 2020, 2022, 2024, etc.). For the 2019-2030 time period, establish annual statutory obligation percentages for all electricity suppliers ("load serving entities") and annual NYSERDA procurement amounts in law. Also, codify the post-2030 goal of 100% carbon-free electricity, using the renewable technologies that are currently eligible in the Renewable Energy Standard.

2. **Streamline the siting[1] of renewable energy projects.** The siting of grid-connected wind and solar projects is governed by Article 10 of the Public Service Law, which was originally designed for fossil fuel power plants. It is unnecessarily complicated and time-consuming when applied to renewable energy projects and is slowing construction at a time it desperately needs to accelerate. In fact, only one project has been certified since the law was passed (The Power Act of 2011), and it is unlikely that the next project will be certified before an additional six months. We suggest two simple changes to Article 10. First, establish a 6-month review period for renewable energy projects after an application is deemed compliant. (Current law specifies a 12-month review for all new generators, renewable or not, but 6 months for repowering.) Second, add a statement in the decision-making section that the Siting Board must consider greenhouse gas emissions reductions goals and/or renewable energy mandates in its determination of whether to waive local law. Further, and perhaps more importantly, we urge you to support the appropriation in the Governor's Proposed Budget for additional resources and the hiring of eight professionals for the Department of Public Service (DPS) to augment the small staff now responsible for a long, long queue of project reviews. Many of the delays in the Article 10 process can be solved with process improvements and additional staff resources.

3. **Provide NYSERDA flexibility in procurement mechanisms.** Legislation should authorize NYSERDA to procure renewable energy in a variety of ways in furtherance of the Clean Energy Standard goals. (Neither the CCPA or the CLA do this). NYSERDA

[1] Here, siting refers to the State and local permitting requirements. The New York Independent System Operator (NYISO) interconnection process, which is not under the jurisdiction of New York, is also overly time-consuming and expensive, and is significantly slowing down renewable energy development.

should be authorized to procure renewable energy through (1) the competitive procurement of RECs under 20 year fixed REC contracts (as is used now for Tier 1 of the CES); (2) through the competitive procurement of RECs under 20 or 25 year indexed, variable REC contracts (as is about to be used for offshore wind procurement); and (3) through standard offers for RECs under long-term fixed REC contracts. This flexibility could help accelerate procurement and construction.

4. **Require utilities to sign Power Purchase Agreements**. To augment and strengthen the Clean Energy Standard (CES), and to reduce ratepayer costs,[2] a legislative initiative could require utilities to buy a small percentage of the electricity that they supply through long-term contracts to purchase the power and its renewable attributes. These Power Purchase Agreements (PPAs) are used in nearly all other states that have renewable energy standards; states that are competing with New York for investment. The percentage could start low, at 1% of a utility's load for example, and ramp up to 10% over time. The amount that a utility buys through PPAs would serve to meet a portion of their CES obligation and would complement the NYSERDA procurement program. The PPAs would not be revised unless there was full consent of the contracting parties and the Commission. Contracts entered into by utilities and approved by the Commission would be deemed prudent by the Commission.

5. **Solve the "Tier 2" issue.** New York's current Clean Energy Standard does not address support for any pre-2015 renewable energy facilities. If these facilities either close down or export their Renewable Energy Certificates (RECs) to New England, achieving New

[2] During the Public Service Commission Clean Energy Standard proceeding, there have been three NYS papers that have determined or projected that Power Purchase Agreements (PPAs) would yield ratepayer savings as compared to Renewable Energy Certificates (REC)-only contracts. The Large Scale Renewables Development, Options Assessment, Final Report (June 2015), in Section 1.8.1 Economic Modelling Results, states, "New procurement options (Utility-Backed PPAs or Utility-Owned Generation) can significantly reduce the cost of electricity relative to current policy (NYSERDA 20-year REC Contracts)." The Clean Energy Standard White Paper Cost Study (April 2016) states at page 40, "Consistent with the analysis presented in the 2015 LSR Options Paper, the greater revenue certainty of PPAs (resulting in reduced investor exposure to commodity market price risk), allows projects to come forward at a lower expected gross program cost than a fixed-price REC approach." Section 9-Bill Impacts in this same paper concludes on page 97, "The base case impact is forecast at 0.95%. Under 100% PPA procurement this drops to 0.66%; under 100% fixed-REC procurement this is projected at 1.23%." Most recently, the Offshore Wind Policy Options Paper, (January 2018), examined seven procurement options. It concluded that PPAs would have lower ratepayer impact than fixed REC contracts, estimating a $1.2B incremental cost (.76% bill impact) for fixed REC contracts versus a $.3B incremental cost (.19% bill impact) for PPAs.

York's renewable energy targets will be that much harder. To address this policy gap, any legislation should require electricity suppliers to buy RECs from pre-2015 generators, as is required in Senate Bill 23 (S.23/Parker).

6. **Codify New York's commitment to offshore wind**. New York should be the epicenter of the nascent U.S. offshore wind industry. To ensure that New York realizes the thousands of jobs and billions of dollars in investment related to offshore wind development, we urge the Committee to consider expanding our State's offshore wind goal to 9,000 MW by 2035. Further, we urge you to support the $200 million in the Governor's Proposed Executive Budget for port development. This investment is critical to establishing New York as the epicenter of this new American clean energy industry and would send a strong, positive signal to the companies bidding into the NYSERDA offshore wind solicitation. It will help attract supply chain businesses and generate hundreds of jobs now and well into the future.

7. **Codify energy efficiency goals and double down on distributed solar.** To achieve 100% renewable electricity, New York is going to need significant investment in all three market segments: Efficiency, Distributed Renewables, and Grid-connected Renewables. The NYS Public Service Commission recently issued an Order[3] that established a strong new statewide energy efficiency mandate and assigned energy efficiency targets to each of the state's investor-owned utilities. We urge the Committee to establish this target (185 TBtu) in law as part of your legislation. Furthermore, the successful NY-Sun Program is on target to achieve 3,000 MW of distributed solar by 2023. We encourage you to raise the bar and establish in law an even more aggressive goal of 6,000 MW – enough to power 1 million homes -- as promoted by the Million Solar Strong[4] campaign. The Governor's proposed 3,000 MW energy storage goal should also be established in law.

8. **Public procurement of 100% renewable electricity.** New York can jumpstart progress towards the 100% clean energy goal by procuring renewable electricity for its own use and providing NYPA the authority to procure renewable energy for cities, towns, and school districts. This would entail a statutory commitment that New York State cover 100% of its

[3] Order Adopting Accelerated Energy Efficiency Targets. CASE 18-M-0084, New York Public Service Commission, December 13, 2018.
[4] To learn more about the Million Solar Strong campaign, please see: https://www.solarstrongny.org/

electricity demand through the purchase and retirement of RECs. Further, we support NYPA obtaining authority to buy renewable energy for all interested public entities and Community Choice Aggregation programs that request it, as proposed in Part LL of the Governor's Executive Budget. ACE NY has issued a Memo of Support for this portion of the Executive Budget. NYPA should procure renewable energy rather than develop or own new generation projects itself.

9. **Establish incentives for communities that host renewable energy projects.** Renewable energy development needs to significantly accelerate in order to meet New York's ambitious goals and proposed renewable energy projects need to be hosted and welcomed by New York's municipalities. Your legislation could establish incentives for communities that host renewable energy projects in order to make hosting renewable energy more attractive to local governments and to harmonize State goals. Incentives could take the form of (1) new grants, (2) prioritization in the existing suite of municipal grants administered through the Regional Economic Development Councils, and (3) legislative language that specifies that local tax revenue paid under Payments in Lieu of Taxes (PILOTs) by renewable energy generators does not have to be included in a municipality's calculation under the 2% property tax cap.

10. **Provide incentives to grow the voluntary market.** New York should establish incentives for the voluntary purchase of renewables, using grants for non-profits or municipalities (e.g., towns, cities, schools or hospitals) that enter into long-term contracts to buy renewable electricity. Similarly, New York should establish tax credits for for-profit companies that voluntarily buy renewable electricity using long-term contracts for "Made in NY" renewable energy. These tax credits could offset some portion of the premium that companies may need to pay for renewable electricity. The legislation should define "Made in NY" renewable energy and could address confusion about the additionality of voluntary renewable energy purchases.

Senator Kaminsky, thank you for your leadership and that of the Senate Environmental Conservation Committee in exploring the CCPA and holding this hearing. The fact is, New York's progressive energy and environmental policies are the talk of the nation. And this role could be

further strengthened – and made more permanent – by passing legislation. Legislation to address climate change could set the stage for aggressive action that will help ensure that these goals become lasting requirements; that renewable energy projects get built according to a rigorous schedule that meets those requirements; and that thousands of New Yorkers are put to work in the process.

The Alliance for Clean Energy New York appreciates your consideration of the ten potential legislative elements outlined above, and we hope they are included in the legislation so that it stimulates clean energy investment in New York. We stand ready to help you accomplish these recommendations, and other aspects of the Community and Climate Protection Act, including job training and transition initiatives, education programs, and other activities.

I welcome any questions you or your staff may have regarding our proposals. I can be reached at 518-432-1405, 518-248-4556 (mobile), or areynolds@aceny.org.

Sincerely,

Anne Reynolds
Executive Director, Alliance for Clean Energy New York

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