

STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

CASE 15-E-0302 — In the Matter of the Implementation of a Large-Scale Renewable Program

**COMMENTS OF THE ALLIANCE FOR CLEAN ENERGY NEW YORK,
AMERICAN WIND ENERGY ASSOCIATION, ADVANCED ENERGY
ECONOMY INSTITUTE, SOLAR ENERGY INDUSTRIES ASSOCIATION,
NEW YORK SOLAR ENERGY INDUSTRIES ASSOCIATION AND NEW
ENGLAND CLEAN ENERGY COUNCIL**

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I. INTRODUCTION AND EXECUTIVE SUMMARY

The Alliance for Clean Energy New York, American Wind Energy Association, Advanced Energy Economy Institute, Solar Energy Industries Association, New York Solar Energy Industries Association, and New England Clean Energy Council (“Renewable Energy Industry”) respectfully submit the following comments in response to the *Notice Instituting Proceeding, Soliciting Comments, and Providing for Technical Conference*, issued June 1, 2015 in the above-referenced proceeding.¹

The Alliance for Clean Energy New York (ACE NY) is a nonprofit membership organization whose mission is to promote clean energy, energy efficiency, a healthy environment and a strong economy for New York State. This diverse coalition includes private renewable energy and energy efficiency companies, environmental and economic development organizations, academic institutions, and consultants to the energy sector. The clean energy technologies represented by ACE NY members include land-based wind, offshore wind, hydropower, biomass, biogas, fuel cells, energy efficiency, distributed wind, and solar.

The American Wind Energy Association (AWEA) is the national trade association for the U.S. wind industry – the country’s fastest growing energy industry. With thousands of wind industry members and wind policy advocates, AWEA promotes wind energy as a clean source of electricity for American consumers. As the premier organization representing the interests of America’s wind energy industry, AWEA counts more than 1,200 organizations in its membership program. Its members are wind power project developers and parts manufacturers; utilities; and researchers – organizations at the forefront of the wind energy industry.

The mission of Advanced Energy Economy Institute (AEEI), the charitable and educational organization affiliated with Advanced Energy Economy (AEE), is to raise

¹ These comments represent the view of signatory organizations (ACE NY, AWEA, AEEI, SEIA, NYSEIA, and NECEC) and not necessarily the view of all member companies.

awareness of the public benefits and opportunities of advanced energy. AEE is a national business association representing leaders in the advanced energy industry. AEE supports a broad portfolio of technologies, products and services that enhances U.S. competitiveness and economic growth through an efficient, high-performing energy system that is clean, secure, and affordable.

Established in 1974, the Solar Energy Industries Association (SEIA) is the national trade association of the United States solar energy industry and is a broad-based voice of the solar industry in New York. Through advocacy and education, SEIA and its 1,000 member companies are building a strong solar industry to power America. There are 70 SEIA member companies in operation in New York working in all market segments – residential, commercial, and utility-scale. Many SEIA member companies engage in large-scale solar project development throughout the United States. In addition, SEIA member companies provide solar panels and equipment, financing, and other services to a large portion of New York solar projects.

Founded in 1994, the New York Solar Energy Industries Association (NYSEIA) is a membership and trade association dedicated solely to advancing New York’s solar energy market for the benefit of electric customers across the state. Over the past 20 years, NYSEIA has been actively engaged in policies, programs, and regulations that impact the State’s solar market and its member companies.

The New England Clean Energy Council (NECEC) is a regional nonprofit organization representing clean energy companies and entrepreneurs throughout New England and the Northeast. Its mission is to accelerate the region’s clean energy economy to global leadership by building an active community of stakeholders and a world-class cluster of clean energy companies.

The Renewable Energy Industry strongly supports New York State’s pursuit of a new large-scale renewables (LSR) policy to replace the expiring Renewable Portfolio Standard (RPS) Main Tier, and we are pleased to offer the following detailed comments

on the NYSEERDA paper, *Large-Scale Renewable Energy Development in New York: Options and Assessment, Final Report* (“Options Paper”). Renewable energy provides significant and multiple benefits to New Yorkers, including keeping energy dollars in-state; promoting local economic development; reducing the carbon emissions that cause global climate change; diversifying New York’s electricity supply in a market increasingly dominated by natural gas; providing long-term price stability in electricity supply; and avoiding the air pollution that contributes to smog and acid rain. For all of these reasons, we support the development of a new LSR framework that relies on proven procurement strategies. Further, while the Renewable Energy Industry wholeheartedly supports the recommendation for a long-term deployment strategy, we call on the State to make a stronger funding commitment than is embodied in the Options Paper thus far, in order to further maximize the net benefits for New Yorkers.

As described in more detail below, the Renewable Energy Industry strongly believes that the new LSR Program for New York State should be a utility obligation to procure a specified percentage of renewable energy by specified dates, i.e. it should be a “target-driven” policy. A clear, target-driven renewable energy policy has proven successful in other states.² This type of approach is competitive and market-driven, and stimulates private sector investment to achieve a clean energy future, all characteristics reflected in the principles of New York’s State Energy Plan.³ The targets specified for the new LSR Program should be at the level necessary to achieve the new 50% by 2030 renewable energy goal, also expressed in the State Energy Plan, recognizing that half of this goal will be met by existing renewables; a portion will be achieved through energy efficiency; and a portion will be achieved by new distributed energy generation resources (DER).

The utilities should be required to meet this obligation through long-term, bundled power purchase agreements (PPAs). As shown in the analyses in the Options Paper, utility-backed PPAs offer the most chance for success in attracting investment and construction

² Clean Energy States Alliance, *Recommended Principles and Best Practices for State Renewable Portfolio Standards* (2009): 2. <http://www.cesa.org/assets/Uploads/Resources-post-8-16/Principles-Best-Practices-RPS-2.pdf>.

³ New York State Energy Planning Board, *The Energy to Lead: 2015 New York State Energy Plan*. Available at www.energyplan.ny.gov.

in New York, and can advance renewable energy goals at least cost and risk to New York ratepayers. The utility-backed PPAs would be competitively procured, with independent power producers offering competitive, least-cost bids. We support Option 3A (“PPA-Only Solicitations”) as described in the Options Paper.

Furthermore, the new LSR Program should not allow utility-owned generation (UOG) of large-scale renewables.⁴ The Options Paper does not put forward a compelling case in support of UOG and instead raises considerable risks and costs associated with UOG, including a transfer of risk to ratepayers; higher costs in all but one unlikely scenario; a severe chilling of competitive markets; opportunities for bias and vertical market power; and backtracking on the progress of electricity system restructuring over the last 15 years.

In addition to the issues summarized in this introduction, **Part II** of our comments (sections II.A through II.H) highlights a variety of other priority issues, such as the imperative to foster diverse technologies, including offshore wind; the necessity to develop a policy proposal for legacy LSR; the need to integrate Long Island into the LSR Program; and the importance of timely progress in the design and implementation on New York’s new, next-generation LSR Program.

Part III of these comments addresses the thirteen questions posed by the Commission in the *Notice Instituting Proceeding, Soliciting Comments, and Providing for Technical Conference*. In the course of answering these questions, we present the following conclusions (presented in order of the 13 questions):

- The criteria of maximizing renewable generation should be the most heavily weighted.
- A target-driven approach best ensures generation goals will be met.
- Technology eligibility need not change, but the new LSR Program should be clear on eligible technology applications.
- The electric distribution utility should be the obligated procurement entity.

⁴ SEIA supports the position on utility-owned generation expressed in this paper given the deregulated market structure in New York, in which utilities have divested themselves of generation assets, and in view of current policy objectives. However, SEIA may take other positions on utility-owned generation in other states, markets, or policy environments.

- The new LSR Program must support technology diversity, including offshore wind.
- The new LSR Program needs to include Long Island.
- Cost containment needs to be balanced with certainty for developers.
- Option 3A best achieves all criteria and policy goals.
- The LSR Program should use bundled PPAs to attract YieldCos, as well as to offer price stability and minimize costs.
- RBB securitization should be further developed and analyzed.
- EDCs should be the signatories to PPAs with developers.
- Utilities should be remunerated based on actual costs incurred.
- The LSR budget should be directly linked to renewable energy goals.
- LSR investment should be evenly distributed over time.
- The LSR Program should support new and existing LSR.
- Models to animate voluntary markets deserve further exploration.
- Potential modifications to the NYISO market should be analyzed.
- The NYISO should exempt renewable energy from buyer-side mitigation.
- The NYISO should modify the interconnection process to synchronize with Article 10.
- Utilities should not be allowed to own and rate-base generation.
- LSR solicitations should be administered by a third party.
- Project selection should be based on price and economic benefit.
- Deployment levels should be based on renewable energy goals.
- System needs should be included in selection criteria if they are not already incorporated into bid prices.

ACE NY, AWEA, AEEI, SEIA, NYSEIA, and NECEC appreciate the opportunity to submit these comments and look forward to a productive dialogue among stakeholders and the Commission regarding this critical program.

II. PRIORITY ISSUES

We enthusiastically support the initiative to foster further development of LSR in New York. We offer the Commission the following comments to support the development of a strong LSR Program.

A. The LSR Program should be target-based and more affirmatively support development at scale to maximize clean generation.

We applaud the State Energy Plan for setting the State on a path to more clean energy. Establishing clear targets is important to ensuring the development of new clean energy projects. To achieve the goals of the State Energy Plan, the Commission should, via Order, establish the goal of 50% renewable energy by 2030.

We recommend that the new LSR Program be based on a percentage target rather than on a budget. For renewable energy developers this would offer significantly more certainty of demand, which is important in ensuring adequate supplies of clean energy at the lowest prices. It also incorporates more accountability into the LSR Program and increases the likelihood that New York will achieve its clean energy goals. Conversely, a budget-based target would implicitly base New York's clean energy targets on the price of fossil fuels. Under a budget-based approach, if the cost of fossil fuels declined, so would New York's procurement of clean energy.

If, however, the LSR Program is ultimately defined by a budget, the budget should be determined based on modeling the amount necessary to achieve the 50% renewable energy goal, recognizing that this goal will be met through a combination of existing renewable generation, energy efficiency, distributed resources, and new large-scale renewables. The Program should have interim milestones and a mid-course correction if the LSR investment level is not achieving the projected MWh necessary to meet established milestones toward the 50% goal. This approach would increase certainty but still maintain a cost cap.

Also related to achieving renewable energy at scale, the LSR Program should be designed to ensure that electricity generation retirements are replaced with renewable projects, and that LSR is part of the State's overall strategy to have adequate capacity and achieve reliability margins.

B. The LSR Program should include critical design elements: long-term signal, ten-year time horizon, and emphasis on bundled power purchase agreements.

We enthusiastically support the ten-year time horizon included in the Options Paper, and underscore how critical this is to a successful LSR Program. Given the significant lead-time required to successfully develop large-scale renewable projects in New York, this timeframe is necessary.

We also support the emphasis on bundled power purchase agreements (PPAs) included in the Options Paper. Throughout the Options Paper, there is evidence of both the necessity of PPAs to attract investors to New York, as well as to attract YieldCos, and the ability of long-term PPAs to achieve clean energy goals at lower costs for ratepayers. PPAs will allow New Yorkers to take advantage of not only the clean air and carbon-free benefits of wind power and other renewables, but also the fuel-free price stability.

As discussed in more detail in response to Question 3, our preferred option is 3A, under which electric distribution companies (EDCs) would have the obligation to enter into PPAs with independent power producers using a competitive process coordinated by a State entity.

C. The LSR Program should not allow utility-owned generation.

We strongly oppose utility-owned generation (UOG). The Options Paper rightly identifies significant issues with vertical market power, utility bias, complexity, the need for more oversight, and the difficulties in comparing bids for UOG to bids for PPAs. The Options Paper does not put forward any suggestions that would adequately overcome these issues and fairly level the playing field between UOG and IPPs. Perhaps more importantly, the Options Paper offers no supportable evidence that allowing UOG would bring benefits to ratepayers. The analysis described in Chapter 8 offers only one unlikely scenario in which UOG is more affordable: a ten-year extension of the federal production tax credit (PTC) where renewable developers are unable to take advantage of it, despite the widespread expectation that the PTC will not continue for ten years, and a history of renewable energy developers being well able to take advantage of the PTC. The cost advantage of UOG modeled in this unlikely scenario is erased when the risk to ratepayers for underperformance or higher-than-expected operation and maintenance costs of UOG assets is considered (see Figure 15 of the Options Paper).⁵

The Options Paper does not offer evidence that UOG would, in fact, increase the amount of competition in the solicitation process, especially if utility-owned affiliates are able to participate, or that EDCs would achieve a lower cost of capital, as is assumed in the text. As a maturing industry, wind developers have the opportunity to take advantage of many low-cost capital options that can compete with EDCs. With the increased participation of YieldCos in the New York market, and potentially with the utilization of ratepayer-backed bond (RBB) securitization, the cost of capital will be further lowered.

Finally, the Options Paper mentions but does not adequately explore the foundational issue that New York State's electricity markets preclude generation ownership by EDCs, which has resulted in increased competition, decreased ratepayer risk, and the entry of newer and cheaper energy supply. Allowing UOG of large-scale renewables

⁵ Options Paper, p. 103.

would backtrack on that progress and would set an unjustified, uncompetitive, and potentially harmful precedent.

D. The LSR Program should support offshore wind development.

The LSR Program should be designed to foster offshore wind development because the State will need to utilize all available technologies to achieve the 50% renewable energy goal, and offshore wind has not yet been deployed in New York. While Atlantic offshore wind has become a mature technology in Europe, where over 3,000 offshore turbines have been installed, offshore wind currently has no opportunity in New York State, unlike other mature technologies. Offshore wind offers unique benefits, especially the ability to deliver energy and capacity directly into the constrained New York City and Long Island load pockets. The *New York State Renewable Energy and Energy Efficiency Potential Study*, issued by NYSERDA in 2014, indicated an offshore wind economic potential of 2,571 GWh, or 1% of 2030 load.

The LSR Program is the right policy mechanism to support offshore wind for three reasons. First, offshore wind projects require the same type of offtake agreement (preferably a bundled long-term PPA) as other large-scale resources. Second, an LSR Program that includes offshore wind will require less administrative cost and time on the part of utilities than a stand-alone offshore wind program. Third, by including offshore wind in the LSR Program, the State of New York can materially reduce its cost. The *New York State Offshore Wind Cost Study*, issued by NYSERDA, found that through a combination of state policy interventions – most importantly, creating market visibility by committing to a pipeline of projects – the State could reduce the cost of offshore wind by 33%, as summarized in Appendix C of the Options Paper. The new LSR Program offers the opportunity for New York to create that market visibility and commit to a pipeline of projects.

Given the unique benefits of this technology and the potential for New York State to influence declining costs, the new LSR Program should be designed to both take advantage of declining costs and achieve further cost reductions for offshore wind, much like the successful NY-Sun program was designed to both take advantage of declining costs and achieve further cost reductions in solar PV deployment.

To support offshore wind, the new LSR Program should have an offshore wind tier in the utility obligation, as mentioned in Options Paper on page 50, which is an approach used in New Jersey and Maryland.^{6,7} Doing so could help reduce or defer the need to build other forms of generation in zones J and K where capacity is needed; the NYISO's 2014 Reliability Needs Assessment identifies the need for 1,200 MW of new capacity in zones J and K by 2024.⁸ Further, as part of the new LSR Program, LIPA could procure offshore wind through a PPA for its customers, or NYPA could procure offshore wind through a bundled PPA and provide this power to its own customers, EDCs, or the voluntary market. As pointed out in the Options Paper, offshore wind is an early-stage LSR opportunity that must be pursued to achieve 50% renewable energy for New York by 2030. The LSR Program should integrate offshore wind, but would need to do so at an overall program investment above the currently proposed level of \$1.5B.

E. The LSR Program should be designed to capture the benefits of renewable energy resource diversity.

⁶ As the national and state-level associations for solar companies, SEIA and NYSEIA advocate on behalf of solar companies and the solar industry, and therefore do not take a position on the offshore wind tier. If the Commission does adopt an offshore wind tier, SEIA and NYSEIA agree that it must be above the proposed LSR investment level of \$1.5B.

⁷ AEEI supports technology-neutral policies for advanced energy technologies. While it recognizes the important potential of offshore wind development in New York in meeting the State's renewable energy goals, and supports policies to bolster the deployment of offshore wind and other emerging technologies, AEEI is not taking a position on an offshore wind tier at this time.

⁸ New York Independent System Operator, *2014 Reliability Needs Assessment: Final Report* (2014): 61. http://www.nyiso.com/public/webdocs/markets_operations/services/planning/Planning_Studies/Reliability_Planning_Studies/Reliability_Assessment_Documents/2014%20RNA_final_09162014.pdf.

Similar to any long-term investment portfolio, resource diversity within New York's renewable energy sector is key to creating a more stable portfolio by balancing out the benefits and attributes of one investment with different benefits and attributes from another. Past experience and a review of the different attributes of LSR demonstrates the importance of diversity in a renewable energy portfolio, particularly for a state with ambitious renewable penetration goals such as New York's. For example, land-based wind and solar, two resources which have become increasingly competitive, have complimentary electric generation profiles. This relationship aligns well with daily load patterns. Other renewable generation resources such as offshore wind, biogas, hydropower, or fuels cells can help further align LSR output with utility load profiles, reducing the need for support from non-renewable generation.

Locational diversity is also important to an LSR portfolio, both within a single resource type and among different resources, dramatically smoothing intermittency of renewable generation. For example, one study from the Lawrence Berkeley National Laboratory found that geographic diversity over 23 solar systems reduced the amount and magnitude of intermittency by 84% over 1 minute and 69% over 1 hour.⁹ Geographic diversity in wind generation has an even stronger effect, with the interconnection of 20 wind plants reducing hourly variability by 95%.¹⁰ By creating a program that emphasizes locational value and resource diversity, New York can assure a more predictable level of LSR output while optimizing use of the State's transmission and distribution infrastructure.

In recent years, New York has focused on developing markets for residential and commercial solar projects, working to bring those segments to scale and reduce soft costs. Meanwhile, utility-scale solar has seen dramatic cost declines across the US, and this market segment can provide many benefits that are complimentary to other

⁹ Andrew Mills and Ryan Wisler, "Implications of Wide-Area Geographic Diversity for Short-Term Variability of Solar Power (LBNL-3884E)" (Lawrence Berkeley National Laboratory, Environmental Energy Technologies Division: 2010). <http://emp.lbl.gov/sites/all/files/REPORT%20lbl-3884e.pdf>.

¹⁰ Warren Katzenstein, Emily Fertig and Jay Apt, "The variability of interconnected wind plants," *Energy Policy* Volume 38, Issue 8 (2010): 4400-4410.

renewable resources. An LSR program that acknowledges the benefits of diverse renewable energy resources will send signals to the utility-scale solar development community to invest in New York, enabling the State to take advantage of the dramatic cost declines in utility-scale solar that have occurred over the last several years and ramp up its solar deployment. The same can be said for other technologies, such as fuel cells and biogas.

In the new LSR Program, these diversity values should be captured through a market-based and objective means, rather than through any subjective or qualitative metrics. An approach to achieve this would be to base bid selection on the required premium within the bundled offer price, also referred to as the “implied REC.” The implied REC is simply the bundled offer price less the expected market-based revenues the project will realize for energy, capacity and ancillary services. Because projects that are more advantageously located within constrained areas will receive higher capacity value, and those that are more peak-oriented will fetch higher total revenues in the forward energy markets, all else equal, these projects will require a lesser premium. In our response to Question 13, we put forward the concept of an “implied REC” as a market-based mechanism that would allow New York to rank proposed projects consistent with REV principles.

F. The Proposal needs detail on legacy LSR.

As described in more detail in the answer to Question 10, New York needs a replacement policy for not only the RPS Main Tier, but also the Maintenance Tier. In the next ten years, the nearly 2,000 MW of renewable energy procured under the Main Tier will be coming off contracts, and the State’s goal should be to maintain those clean resources, and their associated renewable energy credits (RECs), in the New York market. New York needs a legacy LSR program to achieve that goal, and the budget to do so needs to be in addition to the investments necessary to achieve new LSR (proposed at \$1.5B).

G. The LSR Program should provide certainty and enforceability.

Given the timeline required for developing large-scale renewable resources, long-term certainty of demand is critical for ensuring adequate supply. The new LSR Program should be target-driven and include alternative compliance payments for EDCs that fail to meet their obligation, in order to have a program that has certainty and enforceability.

States with RPS policies that incorporate an alternative compliance payment (ACP) have typically been able to achieve their RPS targets with credits from renewable energy generation.¹¹ Many of these programs also have force majeure provisions or a cost cap. Further, it should be noted that while an enforcement component is necessary to send a strong market signal to renewable energy investors, in practice, states with cost caps seldom have to employ their enforcement mechanisms because these caps are rarely hit, while deployment goals are generally achieved.¹²

In the case that the LSR Program is budget-driven, the Program should have a predetermined schedule of solicitations and solicitation amounts, with adequate advanced notice. As an illustrative example, if the LSR Program released a schedule providing for an annual solicitation on February 1 of each year, each for 1.3% of total load, the Program would be providing excellent visibility into market demand, and would stimulate considerable development activity, resulting in robust competition in response to each solicitation. Developers would also welcome solicitations twice per year.

H. New York needs a unified statewide LSR Program that includes Long Island and NYPA customers.

¹¹ Lawrence Berkeley National Laboratory, *Renewables Portfolio Standards in the United States: A Status Update* (2014): 10. <http://emp.lbl.gov/sites/all/files/2014%20REM.pdf>.

¹² National Renewable Energy Laboratory and Lawrence Berkeley National Laboratory, *A Survey of State-Level Cost and Benefit Estimates of Renewable Portfolio Standards* (2014): 45-50. <http://www.nrel.gov/docs/fy14osti/61042.pdf>.

New York needs a comprehensive statewide policy to ensure that all New Yorkers equally receive clean energy benefits, without discrimination based on where they live.

Long Island, which represents 15% of New York's population and load, is functionally excluded from the energy policy enjoyed by other New Yorkers. While Long Island leads the State in installed solar capacity, the total MWh generated is still low. As a result, despite LIPA's stated policy of supporting the (old) 30% RPS goal, according to the NYISO's 2015 *Power Trends* report, only 3% of Long Island's energy comes from renewable sources.¹³ The approach used over the last ten years has not succeeded in aligning the LIPA program with the statewide RPS Main Tier. It is important to fix this imbalance because Long Island represents such a significant portion of New York's load and population, and has some of the oldest generating units in the State.

The new LSR Program should strive to integrate Long Island and achieve consistency in statewide policy. Offering a single program with common rules would allow for more efficient implementation, and could lower overall administrative costs for both the State and developers. While a single unified program would be ideal, we also recognize that Long Island is under a different structure than other utilities in the State, and jurisdictional issues need to be addressed. At an absolute minimum, the LSR Program should ensure that Long Island has the same targets, requirements, accountability, and enforcement mechanisms as every other EDC in New York, and the LIPA/PSEG budget for LSR should be commensurate with the budget for other EDCs.

Similarly, NYPA and its customers should be integrated into the statewide LSR Program in some way, potentially by NYPA entering into PPAs with generation

¹³ New York Independent System Operator, *POWER TRENDS 2015: Rightsizing the Grid* (2015): 26. http://www.nyiso.com/public/webdocs/media_room/press_releases/2015/Child_PowerTrends_2015/ptrends2015_FI_NAL.pdf.

owners at commensurate investment levels as the EDCs, or by another method that would align targets and procurement amounts.

I. The timing of implementation is critical and the Commission may want to consider two phases of implementation.

We appreciate that New York State has developed such a comprehensive discussion of the options for designing a new, next-generation LSR Program to replace the expiring RPS Main Tier, and has also announced a final RPS Main Tier solicitation for 2016. It is important that there be no gap in renewables policy in New York so we can maintain a queue of projects under development, and investors and developers can remain confident in the New York market. There is a lengthy project development timeframe for large-scale renewables, so it is critical to get a program designed and in place soon.

Given this interest in timely design, finalization, and implementation of the new LSR policy, we suggest that one of the criteria for selecting the preferred option should be the ability for it to be designed and finalized by the end of 2015, so that the implementation process can commence in 2016. If there are elements of the new LSR Program that require lengthier discussion, additional analysis, or new statutory authority, we suggest that they be pursued by the Commission in a parallel track that will not slow down finalization of the core option.

III. QUESTIONS FOR STAKEHOLDERS

- 1. Chapter 4 outlines criteria for evaluating large-scale renewable (LSR) options addressed in the report. Are there any criteria that should be eliminated or added? To the degree that the criteria may conflict, are there some that should be prioritized over others?**

MAXIMIZING GENERATION OF RENEWABLE ENERGY

The most important and most heavily weighted evaluation consideration should be the ability of the LSR procurement model to maximize generation, because that is the primary objective of establishing an LSR program to replace the expiring RPS Main Tier. It is also the criterion most closely linked with other important policy objectives, such as GHG reductions, fuel diversity, and local economic development. As such, this category should be weighted significantly more than the others. As currently written in the Options Paper, this category includes three criteria, all of which we support. They are:

- *Encourages successful generation development.*
- *Maximizes likelihood of contract leading to successful project.*
- *Can be implemented at scale.*

We suggest that the following criteria also be considered in the “Maximize Generation” category:

- Extent to which the option can create a robust pipeline of projects to ensure healthy competition in response to solicitations, and the coincidence of project development with generation retirements.
- Extent to which the option allows for a predetermined and publicized schedule of solicitations, along with advance notice regarding the scale/amount of each solicitation, to facilitate project development planning, attract developers to New York, and provide certainty regarding the scale of demand.
- Extent to which the option will incent grid-connected development projects of all eligible technologies, including land-based and offshore wind, hydro, fuel cells, utility-scale solar, biomass, and biogas. Offshore wind deserves attention in the new LSR policy as there are currently no opportunities for offshore wind in the State, and all renewable energy technologies will be required for New York to achieve the 50% target.
- Support for legacy LSR in order to maintain it in the New York market, which is key to maximizing renewable generation operating in the State over time.

CONSISTENCY WITH REV AND SEP CRITERIA

With respect to the first category, “Consistency with REV and 2014 Draft State Energy Plan,” the evaluation criteria include a very small subset of the REV and State Energy Plan (SEP) goals, and leave out the most important goals with respect to LSR development: achieving the 50% by 2030 renewable electricity goal, increasing fuel diversity, and achieving GHG reductions. Each of these is a distinct policy objective of the SEP and REV, and the evaluation criteria should reflect that.

FEASIBILITY CRITERIA

We suggest that this category be redefined as “Feasibility and Timeliness” to reflect how important it is that the new LSR Program be implemented in a timely manner so as to maintain development of renewable energy projects and provide certainty to the renewable energy industry, as much as is practicable, by the end of 2015. Under this category, we support the two criteria listed (“Implementation Feasibility” and “Susceptibility to Legal Challenge”), and would suggest the addition of a new criterion related to the ability to begin implementation of a new LSR procurement regime early in 2016.

MINIMIZE COST CRITERIA

We support inclusion of this category and the associated criteria. In attempting to minimize costs in designing the new LSR Program and its targets and investment level, the Commission should consider all costs and benefits to ratepayers, including the avoided cost of other energy and capacity, wholesale market price suppression, and deferrals of new transmission or capacity additions.

This category should consider the risks to ratepayers of UOG, particularly development and operation of generation, as compared to including the recovery of PPA costs through a surcharge or in rates. As the Options Paper points out, UOG creates the risk of “*Potential adverse impacts on ratepayers, who may be assuming risks for underperformance and higher-than-estimated costs.*”¹⁴ Utility ownership of

¹⁴ Options Paper, p. 82, section 6.4.2.

generation shifts risks away from developers/owners to ratepayers, which is not consistent with the goals and principles of New York’s restructuring to a competitive market.

EASE OF TRANSPARENCY AND ADMINISTRATION CRITERIA

We support this category and the associated criteria, but note that the criteria listed (“Administratively efficient”, “Minimize complexity” and “Allows for continued use of Economics Benefit weighting”) do not address transparency. We suggest adding criteria related to transparency, such as:

- Extent to which the option allows for long-term certainty and transparency with respect to the schedule and scale of renewables procurement.
- Extent to which the procurement model is as simple and clear as possible regarding how bids will be evaluated and selected.

COMPATIBILITY AND ACCEPTABILITY CRITERIA

We support this category and the associated criteria, and reiterate the importance of the five criteria listed to renewable energy developers, given our interest in both maintaining healthy competitive markets and minimizing any negative impacts on developers, EDCs, and ratepayers, by striking the right balance with respect to allocation of risks. The criteria listed are:

- *Compatible with Wholesale Competitive Markets.*
- *Compatible with Competitive Retail Markets.*
- *Minimizes potential for Adverse Secondary Impacts on Transacting Parties.*
- *Provides Acceptable Risk Allocation.*
- *Creates equitable competitive framework.*

The issue of UOG is most relevant to compatibility and feasibility, and restricting UOG (Option 3A) very clearly meets these criteria. Allowing UOG is inconsistent and incompatible with competitive wholesale markets, and flies in the face of competitive restructuring in New York State. UOG transfers risks to ratepayers, and therefore does not provide acceptable risk allocation. It also does not create an

equitable competitive framework if utilities are able to rate-base development and operation of renewable generation projects.

- 2. Chapter 5 addresses design features applicable to LSR policy. As New York revisits the structural elements of procuring LSR resources, what changes, if any, should be made to the existing Main Tier program rules regarding obligated entities or eligibility of resources (based on resource type, energy delivery requirements, or vintage)? Please provide justification for each suggested change.**

A TARGET-DRIVEN APPROACH ENSURES GENERATION GOALS WILL BE MET

Chapter 5, “LSR Policy Design Options,” covers diverse design issues. Section 5.1 discusses the benefits of a policy structure that is target-driven versus expenditure- or IRP-driven. While this section discusses these three options for the future LSR policy, it also states: *“This paper assumes the next phase of New York’s RPS will continue to be built around maximizing renewable generation within a particular planning budget.”* We believe that the new LSR policy should, in fact, be linked to a renewable energy target, the 50% by 2030 target expressed in the recently released State Energy Plan. The level of investment in LSR should be commensurate with the level necessary to meet this goal, recognizing that a portion of the goal will be met by legacy large-scale renewables, and a portion by distributed energy resources (DER), including both efficiency and distributed generation.

Assuming, for illustrative purposes, that the LSR Program for new generation was allocated a portion of the goal equal to 20% of total electricity load by 2030,¹⁵ procurement targets could be set at year 3 (4.5% by 2018), year 6 (9% by 2021) and 15% by 2026, at the conclusion of this ten-year program. These types of milestones should serve as the obligation for EDCs. Alternatively, even if a planning budget is still used as a cost cap, the budget should be based on the projected level of

¹⁵ The portion of the 50% to be achieved by legacy (currently existing) renewable resources, distributed resources, and post-2016 grid-tied resources should be estimated/modeled by NYSERDA under various assumptions, and an appropriate percentage allocated to the LSR Program. Over time, if the distributed market is contributing more or less than predicted, the LSR Program target could be adjusted accordingly.

investment necessary to meet these established milestones, and should be adjusted every three years to meet these goals. Otherwise, the Program does not have the adequate transparency and certainty regarding the scale of demand for renewable generation that is necessary to attract long-term investment in the siting and development process.

TECHNOLOGY ELIGIBILITY NEED NOT CHANGE; LSR PROGRAM SHOULD BE CLEAR ON ELIGIBLE TECHNOLOGY APPLICATIONS

We are not putting forth any recommended changes to the eligibility requirements related to technology types, and we support the current definition of eligible technologies, in the belief that the definition is inclusive and appropriate. We do note, however, that the new LSR Program should be clear regarding the eligibility of various technology applications. In the current RPS Main Tier, for example, distributed generation can (and has) bid RECs into NYSERDA solicitations. Guidelines with respect to participation in the new LSR Program should maximize the diversity of technologies likely to participate, in the interest of maximizing competition and minimizing costs, and ensure that various biogas applications, fuel cell applications, land-based and offshore wind, utility-scale solar, and hydropower are all able and likely to participate in the Program.

Towards this goal, the Commission should clarify if there are any circumstances where behind-the-meter technologies could appropriately participate in the LSR Program, assuming such exceptions were consistent with the evolving REV framework and compensation for DER. It might be, for example, that a fuel cell project placed in service for resiliency or power quality needs, or a biogas project at a publicly owned sewage treatment plant, could forego certain DER revenue streams and opt to participate in the LSR Program. These types of circumstances could potentially reduce overall LSR Program costs. This issue should be clarified by the Commission.

THE EDC SHOULD BE THE OBLIGATED ENTITY

The obligated entity should be the EDC, as articulated in Option 3A. We agree with the benefits of utility-backed PPAs as stated in the Options Paper, including, “*EDCs provide a credit-worthy counterparty, and can procure energy as well as RECs, thereby providing a superior revenue hedge to generators under long-term contracts as a means of enabling lowest-cost financing.*”¹⁶ Due to these benefits, and the fact that the Options Paper identifies the potential for a necessary change in law for the implementation of Option 2, we support a design that obligates EDCs.

The issue of enforceability remains important, and relevant to the question of who the obligated entity is. In contrast to nearly every other state with an RPS, New York has not achieved its 2015 target.¹⁷ This is a direct result of program structure. The utilities have not been the obligated entities under the RPS Main Tier and NYSEDA’s procurement has been hampered by changes and delays in schedule and the transfer of funds for other purposes (e.g. \$844,000,000 in RPS Main Tier funds transferred to the Clean Energy Fund¹⁸). A primary interest of both renewable energy developers and environmental organizations is the scale of development and the certainty of demand. Without an enforceable program, these policy goals remain at risk. We continue to ask the Commission to consider policy mechanisms that would make this program enforceable, such as the ACP approach used in other states.

THE NEW LSR PROGRAM MUST SUPPORT TECHNOLOGY DIVERSITY, INCLUDING PROCUREMENT OF OFFSHORE WIND

We support a new LSR Program that allows for and fosters technology diversity, in the firm belief that all types of clean energy technologies are going to be necessary for New York to achieve 50% renewable energy and its greenhouse gas reduction goals. Further, for the reasons stated in section II.D above, we recommend that the LSR Program affirmatively support offshore wind development, by establishing an

¹⁶ Options Paper, p. 48.

¹⁷ Lawrence Berkeley National Laboratory, *Renewables Portfolio Standards in the United States: A Status Update* (2014): 10. <http://emp.lbl.gov/sites/all/files/2014%20REM.pdf>.

¹⁸ *Case 14-M-0094, Proceeding on Motion of the Commission to Consider a Clean Energy Fund*. NYSEDA Clean Energy Fund Information Supplement (June 25, 2015): 174.

offshore wind tier in the utility procurement obligation. In a budget-driven approach, an offshore wind tier would require a level of investment beyond the proposed \$1.5B.

An offshore wind tier could ensure that renewable generation development occurs in zones where new capacity is needed to maintain reliability, particularly in the ConEdison and LIPA territories. It could also address the issue of geographic disparity which arose over time in the existing RPS, and would recognize that all ratepayers would be contributing to the LSR Program and should realize its benefits locally, as much as is practicable, in the form of cleaner air, local construction and operation jobs, PILOT payments, and other community benefits. While the rest of New York State is achieving 25% renewables penetration, according to the NYISO's 2015 *Power Trends* report, there are no grid-scale renewables in New York City.

Furthermore, the LSR Program should encourage the development of new in-state renewable generation. Thirty-one percent of total electricity expenditures, or approximately \$6.8B, leave New York State each year.¹⁹ Investing in new in-state renewable energy projects can keep an increasing portion of total energy expenditures within our borders, as well as create jobs in New York. The Options Paper rightly highlights the connection between this issue and the strategic goals of the 2012 New York Energy Highway Blueprint, i.e. modernization of the State's power generation and transmission system (see page 49). For all of these reasons, the LSR Program should be designed to maximize the development of projects that confer in-state benefits.

THE NEW LSR PROGRAM NEEDS TO INCLUDE LONG ISLAND

We recommend designing the LSR Program in a way that creates a unified policy throughout all of New York State, including Long Island, as detailed in Section II.G above. This is important because Long Island represents 15% of the State's population and load, but lags significantly behind the rest of the State in renewables

¹⁹ See Table 2, "Energy Expenditures that Leave New York's Economy in 2012," on p. 13 of the New York State Energy Plan, Volume 2: Technical Appendix, End-Use Energy.

deployment. While the rest of New York State is achieving 25% renewables penetration, according to the NYISO's 2015 *Power Trends* report, Long Island has only 3%. Even when the pre-2005 hydropower facilities are excluded, Long Island still has roughly half the renewable capacity, in percentage of load, as the rest of the State.

THE NEW LSR PROGRAM SHOULD SUPPORT NEW AND EXISTING RENEWABLES

The latest NYISO *Power Trends* report shows that renewable energy generation accounted for 25% of total electricity demand in 2014, which is significant progress.²⁰ To further this progress, and ensure that the 50% renewable energy goal is achieved, New York needs to assertively procure new grid-tied renewable energy while maintaining the fleet of existing generation.

We support a tiered approach to the EDC obligation that includes a tier for vintage renewables (as discussed briefly on page 50 of the Options Paper). Many renewable energy generating facilities that are operating in New York prior to 2016 will have the option of leaving the New York market and participating in the RPS markets of nearby states, and their ability to do so will increase with likely new transmission investments. This issue is discussed more fully in response to Question 10.

²⁰ New York Independent System Operator, *POWER TRENDS 2015: Rightsizing the Grid* (2015): 7. http://www.nyiso.com/public/webdocs/media_room/press_releases/2015/Child_PowerTrends_2015/ptrends2015_FI_NAL.pdf.

3. Chapter 5 discusses the options for ratepayer funding mechanisms, including an approach that seeks to fix the price for bundled LSR procurement, but necessitating a varying, reconciling collection mechanism due to fluctuating energy prices; and a fixed premium which could readily be supported by a predetermined and fixed collection rate from ratepayers.

a. Are the tradeoffs between a fixed and known collection schedule and one that varies with the price of energy appropriately addressed? If so, is there a strong preference for one funding mechanism over the other?

b. Are there additional cost containment strategies, not identified in Section 5.4.1 that should be considered? If not, is there a preference for some strategies more than others?

Section 5.4 of the Options Paper is focused on the “Ratepayer Funding Mechanism.” Based on this section and the information included in NYSERDA’s recently released Clean Energy Fund Information Supplement, it appears, although does not explicitly state, that the Options Paper is proposing a separate charge within delivery rates for funding investments in LSR, rather than to include these expenditures in delivery rates. Further, the Options Paper discusses two options for the collection of this separate charge: (1) fixed price, varying collection and (2) fixed premium, fixed collection. The first option is described as corresponding to an approach using bundled PPAs,²¹ and the second option as corresponding to an approach that uses fixed REC prices.

We support an LSR Program involving bundled PPAs, for which the fixed price, varying collection approach is more compatible. Further, we recognize that this approach would allow the benefits of a bundled PPA to be appropriately passed on to ratepayers. We recognize the dynamic summarized in the Options Paper: *“When this variable distribution charge is combined with varying market generation service costs, the variations in the collections and generation costs implicitly offset each other, providing a partial hedge to ratepayers and reducing price volatility.”*

²¹ Options Paper at p. 59 states, *“If LSR support is offered in the form of fixed prices for bundled energy and REC supply, the EDC or other purchasing entity will resell energy into the NYISO spot markets, with the net positive or negative difference passed through to EDC distribution ratepayers through a varying (reconciling) charge or collection mechanism.”*

While we support the varying collection with bundled PPAs versus the fixed collection for a fixed REC price, we believe the varying collection approach needs to be balanced with the ultimate public policy goal of maximizing renewable energy generation at minimum expense to ratepayers. To achieve this balance, we suggest that the savings from PPAs be recycled into subsequent annual renewable energy solicitations until appropriate milestones for the amount (MWh) of renewable generation procured are achieved. In this way, when PPAs are demonstrating the value of a set price, that value will be re-directed to procurement of additional PPAs. When procurement milestones (in MWh) have been achieved, additional savings should be returned to ratepayers. This approach strikes a sensible balance between cost containment (as the cost cap would still be in place) and maximizing generation, rather than restricting procurement even when the PPAs have negative costs for ratepayers. We note here that our first preference would be a target-based LSR Program, a scenario in which this issue becomes largely moot.

Section 5.4 also discusses cost containment strategies (in 5.4.9. “Reconciling Targeted Expenditures with Efficient and Effective Procurement to Grow Large-Scale Renewables”). First and foremost, we underscore the importance of honoring PPAs. We agree with the statement, *“once a commitment is made by contract... it is important that the commitment to pay be honored and, for PPAs and REC contracts, that the paying party be assured that it will recover its costs. Otherwise, investment will be deterred or the cost of capital increase, and hence, costs to ratepayers will be increased.”* This is an absolutely critical foundation for the LSR Program.

With this commitment as a foundation, the Options Paper suggests five cost containment strategies:

- “*course correct*” procurement levels, by slowing down subsequent procurements,
- execute contracts based on the “*reasonableness of contract pricing offered,*”
- back-end procurement amounts,

- seek bids for RECs as well as for bundled RECs and energy, and
- be conservative in the quantities solicited.

COST CONTAINMENT NEEDS TO BE BALANCED WITH CERTAINTY FOR DEVELOPERS

The cost containment measures outlined in Section 5.4.9 are motivated by a reasonable desire to minimize costs and risks for ratepayers. But implementation of these measures needs to be balanced by renewable energy developers having adequate certainty with respect to the level of demand in the New York market. Without some level of certainty regarding the scale of demand that the LSR Program will create, developers for any of the eligible technologies will not be adequately motivated to begin investment in the development process in New York. Whether a project is utility-scale solar, wind power, or a new anaerobic digester biogas facility, there are costly and time-consuming development pathways. The costs and risks of these processes must be matched by reasonable chances of success. An approach that continually or significantly changes the scale or timing of planned solicitations based on shorter term market fluctuations – or other eligibility criteria – puts at risk the growth of a robust queue of projects in the development pipeline.

A certain level of stability and certainty regarding the frequency, schedule, and scale of solicitations is necessary to provide developers with the best opportunity to compete in New York markets and to allow for the design of development strategies in response to generation retirements. Furthermore, the simultaneous implementation of all of the cost containment measures listed above does not align with ensuring consistent progress towards the 50% renewable energy goal and the compliance requirements of the federal Clean Power Plan. This is why, in contrast to almost all other RPS states, New York did not meet its stated renewable energy goals.²² The new LSR Program needs a better balance between cost containment and attainment of policy goals than has been evident for the last ten years. Towards this goal, we do not

²² Lawrence Berkeley National Laboratory, *Renewables Portfolio Standards in the United States: A Status Update* (2014): 10. <http://emp.lbl.gov/sites/all/files/2014%20REM.pdf>.

support implementation of all of the cost containment measures listed. In the case of a target-driven program, which we prefer, cost containment could be achieved using an ACP combined with a force majeure provision so that EDCs don't have to pay ACP in the case when there is no reasonable renewable supply available.

In the case of a budget-driven program, cost containment is implicit in the established budget and adjustments to the procurement schedule or sizes would only serve to disrupt the development of new projects because it would create uncertainty in demand. In this case, it should be sufficient protection for ratepayers to:

- have an overall cost cap that is analytically linked to the 50% renewable energy goal,
- adjust subsequent procurement if executed contracts are costing more than projected, and
- allow REC-only bids.

These three cost containment measures should be utilized in combination with:

- a commitment to regularly scheduled solicitations, e.g. released each year on February 1 or released twice per year;
- a commitment to a pre-set solicitation level, e.g. 1.5% of total load or an associated dollar value, unless existing contracts are demonstrating a higher premium than projected after a sufficient time period;
- adequate notice (one year) when a solicitation will be less than the planned level; and
- the use of an approach that recycles savings into subsequent solicitation levels, as described above, until procurement milestones, in MWh, are achieved (although this wouldn't be necessary with a target-based program).

In this way, the level of demand for renewable energy experiences a downside if premiums are larger than projected (in the form of subsequent solicitation levels being course-corrected downward) and an upside if premiums are smaller than projected (in the form of higher-than-planned solicitation levels using recycled PPA

savings, as well as the ability to procure more at the same budgeted amount due to lower premiums.) Further, the established investment level will serve as a cost cap that ensures renewable energy does not result in overly costly energy for ratepayers, and adequate transparency and planning ensures a steady pipeline of projects that can compete to meet demand at the lowest cost.

4. Chapter 6 describes three primary design structures and variants for supporting the development of new LSR resources, within a range of options described in Table 4.

- a. Are there additional benefits, challenges and/or considerations that should be addressed for any of the three primary options and variants? If so, please explain.*
- b. Are there other structures and mechanisms that should be considered for supporting new LSRs that are not mentioned in Chapter 6? If yes, please describe.*

OPTION 3A BEST ACHIEVES ALL CRITERIA AND POLICY GOALS

Chapter 6 describes three options. Option 1 is essentially a continuation of the current RPS Main Tier approach, potentially with the addition of contracts for differences. Although the RPS Main Tier has been a cost-effective program that has achieved 2000 MW of renewable capacity for New York, section 6.2.1 highlights some of the drawbacks to this approach, stating, *“This type of contract may not be sufficiently attractive to developers to develop and build LSRs in New York.”* We agree with this statement. We also agree with the assessment, *“these types of contracts are substantially suboptimal in terms of the criteria of maximizing generation, minimizing cost, and achieving New York’s clean energy goals.”* We generally agree with the benefits and disadvantages described throughout section 6.2. We agree that fixed payments result in a relatively efficient procurement process, however this program design has a number of limitations and challenges, which NYSERDA has well acknowledged. Ultimately, the current Main Tier program has not achieved the 30% by 2015 goal, and therefore we cannot expect that using the same approach without significant changes will achieve the new 50% by 2030 goal.

We believe continuing with the current approach is only an improvement if the program offers a contract for differences (CFD) as outlined in section 6.2.3, and the State also commits to a greater degree of investment and more regular scheduling than has occurred over the last ten years. While CFDs should provide sufficient incentive to increase developers' level of interest, the current program's history indicates New York will not meet its 50% renewables goal without a firmly set procurement schedule and much more meaningful levels of investment.

For all of these reasons, Option 1 is not our preferred option.

Under Option 2, the State would conduct solicitations and enter into bundled PPAs. The inclusion of bundled PPAs, with the associated reductions in costs described in Chapter 8, make this option better than Option 1, however NYSERDA also highlights the weaknesses of Option 2, noting it creates “...*the challenge of a likely need for legislative action, a disadvantage of adding complexity to implement, and associated administrative costs to the procurement process.*”

Option 3A, referred to as PPA-Only, would involve EDCs signing PPAs with developers, with either the EDC or the State running the solicitation process. Option 3B, referred to as “Open-Source Solicitations,” also involves EDCs signing PPAs with developers, but incorporates utility ownership of generation. Both 3A and 3B share the characteristic of EDCs being the counterparty to PPAs through a solicitation process that is coordinated by either EDCs or the State. They differ in that 3B allows utility-owned generation.

Our preferred option for program design is a structure based upon PPA-only solicitations (Option 3A), as described in section 6.4.1. The availability of long-term, bundled PPAs will provide a level of certainty within New York's energy market that is crucial to ensuring LSR projects can attract the financing necessary for development.

We believe utilities are a strong counterparty for PPAs, and the common RFP approach as outlined in sections 6.4.1.2 and 6.4.1.3 includes the benefits of both utilities as contract signatories and the efficiency of a centrally coordinated procurement process. Our preferred option is a state entity-directed solicitation (6.4.1.4). We feel that having a state entity conduct the solicitation process addresses many of the challenges NYSERDA has identified, including, for example, the issues associated with utility affiliates owning generation as discussed in section 6.4.1.5 of the Options Paper. These issues include the potential for undue preference for the affiliate in the selection process; designing the solicitation process with sufficient independent oversight to assure a fair and unbiased process; and addressing concerns regarding the exercise of vertical market power by utilities to favor their affiliates.²³ A state entity-directed solicitation structure would effectively leverage NYSERDA's experience, and, with a set schedule, should foster a more efficient procurement process. Although individual utility procurement (6.4.1.1) has achieved results in other states, creating a situation where developers must negotiate with all utilities separately would likely increase complexity and transaction costs.

We support allowing affiliates of the New York utilities to bid in solicitations, as long as the criteria and conduct guidelines outlined in 6.4.1.5 are adhered to. With comprehensive protection measures in place, engaging utility affiliates addresses the desire to facilitate robust competition by increasing the number of market participants, while balancing the need for consistent state policy regarding utility ownership of generation.

We are opposed to a solicitation structure that would create competition between PPA proposals and renewable generation assets that would become utility-owned generation (Option 3B). We believe that the mitigation measures proposed by NYSERDA would ultimately prove ineffective in ensuring a fair playing field, and the complexities in comparing bids from private developers to bids submitted by

²³ Options Paper, p. 74.

utilities would result in an overly burdensome process that decreases efficiency and increases costs.

We also question whether this option (UOG) would lead to more cost-effective projects given the uncertainty regarding the future status of federal tax credits. The only option assessed in Chapter 8 that predicted lower costs with UOG involved the availability of the federal Production Tax Credit (PTC) for ten more years. First, it seems unlikely that the PTC will be consistently in place for the next ten years, and if the PTC does in fact remain available, past experience leads us to believe it is unlikely there would be a situation in which private developers would not be able to take advantage of it.

Furthermore, reintroducing utility ownership of generation is a major departure from the long-standing principles of electric sector restructuring in New York, and there is no material difference between letting utilities own renewable generation and letting them own any type of generation. Finally, because we support allowing utility affiliates to own generation (with the protections delineated in the Options Paper), we do not believe that UOG is necessary to maintain competition in the solicitation process. In fact, we believe that allowing UOG would have a dramatic chilling effect on competition, as private independent generation owners, concerned with the EDC's ability to rate-base development costs and potentially influence project selection, would shy away from the New York market. The issue of UOG is also addressed below, in our response to question 13.

In sum, Option 3A is our preferred option. As summarized by NYSERDA, "*Long-term bundled product contracts with credit-worthy utilities provide substantial revenue certainty to renewable generators, are the most common method of facilitating financing of new renewable generation in the United States, and as shown in Chapter 8 and below, are likely to minimize the costs to ratepayers of new renewable generation and reduce electricity price volatility ...*"²⁴ Option 3A best

²⁴ Options Paper, p. 89.

achieves the policy goals of maximizing renewable generation at least cost, and best meets the criteria of feasibility, acceptability, and simplicity. Experience in other states shows that Option 3A will work, and New York can draw on this experience to design a new LSR Program that is most effective and uses best practices.

5. Chapter 6 discusses the impact of utility-backed power purchase agreements (PPAs) on credit ratings and other accounting considerations.

- a. Are there any other impacts on credit ratings or accounting requirements that should be considered? If yes, please explain.*
- b. What actions should an LSR option including PPAs with electric distribution utilities employ to minimize those impacts?*

A Commission directive that establishes a cost recovery process, including how and when cost recovery can occur, would provide the EDCs with a level of assurance that mitigates the potential impacts on credit ratings. As long as cost recovery measures are certain over the lifetime of the PPA, the risk of impacts on credit ratings can be reduced or eliminated.

We stress here that the imputed debt associated with PPAs is theoretical and has not materialized. PPAs are not debt instruments and are not reflected in electric distribution companies' financial statements. PPA-related expenses are recovered as pass-through charges on ratepayer bills, so there is no mechanism by which they would be reflected in the EDC's reported income. Furthermore, long-term renewable contracts in New England contain provisions that fully protect utilities from adverse impacts to their creditworthiness due to changes in accounting standards. This perspective is corroborated by the most recent Eversource Financial Statements.²⁵

If the LSR Program is structured with a clear cost recovery mechanism, such as a clear and transparent surcharge on delivery rates with an overall cost cap (linked to

²⁵ See <https://www.eversource.com/Content/docs/default-source/Investors/2014-annual-report.pdf?sfvrsn=2>. Key sections are Page 44 of *Management's Discussion and Analysis of Financial Condition and Results of Operations*, which outlines long-term obligations not included on the balance sheet, and Note 11b, which breaks out the renewable long-term contracts' share of those obligations.

the 50% renewable energy target), and those monies are collected by utilities in the amount equal to the projected costs of long-term PPAs, and those funds are maintained with the utilities without the need for a rate case to determine that they be returned to utilities in future rates, there should be zero risk to utilities of not recovering costs of the PPAs, and thus no risk to utilities that their credit rating will be affected.

6. Chapter 7 provides an overview of financing options for LSR developers and investors that can increase financing efficiency and reduce costs, thereby lowering overall costs to consumers.

- a. Are the risks and benefits of each financing option adequately characterized?*
- b. Are there other factors that should be considered by the Commission in its support of these financing options?*
- c. Should the establishment of a debt securitization option, as described in Chapter 7, be considered?*

We strongly support further exploration of all options to lower financing costs for New York's future LSR development projects, provided that it doesn't delay the implementation of the new LSR Program. We support an LSR Program structure that better allows YieldCos to participate in the New York market. We also support the pursuit of New York State Green Bonds as an innovative low-interest financing mechanism that can attract further renewable energy development to New York State.

THE LSR PROGRAM SHOULD UTILIZE BUNDLED PPAs TO ATTRACT YELDCOS

Chapter 7 of the Options Paper adequately characterizes the risks and benefits of YieldCos. To encourage YieldCos to become more active in New York, the new LSR Program should incorporate bundled PPAs, as included in Option 3A. In contrast to the current REC-only contracts offered in the Main Tier, bundled PPAs offer price certainty (for the sale of energy and RECs) to project investors and thus will better attract YieldCos. In this way, use of utility-backed PPAs will not only

bring down overall program costs as described in Chapter 8 (e.g. Figure 13 in the Options Paper depicting lowest premium for the utility-backed PPA option), but can further reduce costs by a possible \$3/MWh by facilitating YieldCo participation (depicted in Figure 14 of the Options Paper). Further, because YieldCos require a lower rate of return than their associated developer companies or many regulated investor-owned utilities,^{26,27} participation by YieldCos can bring a lower cost of capital than UOG.

RBB SECURITIZATION SHOULD BE FURTHER DEVELOPED AND ANALYZED

Section 7.3 describes the intriguing option of debt securitization and ratepayer-backed bonds (RBB) to support financing for new renewable energy development projects. This option could potentially reduce finance costs and thus achieve the 50% renewable energy goal at overall lower costs. As described in the Options Paper, the State could potentially take on the role of issuing New York State Green Bonds, the proceeds of which would be used to finance a pool of LSR projects at lower rates than an individual project would obtain from other financial institutions. The loan recipients would likely be parties to a bundled PPA with EDCs (or, potentially, with a state agency facilitating the voluntary market) and could use the PPA payments to pay back the loans. The bonds would be repaid by the payments from the generators, but also backed by a dedicated fee paid by all ratepayers if necessary. While ratepayers would share some risk (if loans were not repaid), they would also benefit from the lower PPA costs that will result if financing costs are lower for developers. As shown in Figure 16 in the Options Paper, RBB securitization offers the potential to further reduce LSR Program costs, and reduces costs the most for utility-backed PPAs, our preferred option.

For these reasons, the establishment of a RBB securitization program for New York State should be further developed and analyzed. Based on the Options Paper, this

²⁶ Options Paper, p. 94.

²⁷ Lang Reynolds, “A Peek into YieldCo’s Relative Cost of Capital: An Analysis of a Recent Transaction,” (2015). <https://financere.nrel.gov/finance/content/peek-yieldco-s-relative-cost-capital-analysis-recent-transaction>

program would likely require new legislation. As such, and because it can and should be considered complementary rather than competing with the core option described in the Options Paper, it should be pursued on a separate but parallel track from Option 3A. We look forward to working with NYSERDA and the Commission on further development of this policy concept going forward.

7. Chapter 8 provides the assumptions and methodologies used to analyze the costs of the three primary design structures. Are these assumptions and methodologies reasonable? If not, please explain.

In general, the assumptions and methodologies used to analyze the three options seem reasonable, as does the use of a representative 100 MW wind project for illustrative purposes, even though a range of technologies will be eligible to participate in the LSR Program.

In addition to the analysis presented in the Options Paper, we recommend that NYSERDA develop and share scenario analysis regarding how New York can achieve the 50% renewable energy goal and what portion of that goal should be met by the new LSR Program. We also suggest further analysis of how much renewable energy this program will likely result in, at various investment levels, with sensitivity to natural gas prices. Thirdly, we believe that the discourse regarding this program and its costs and benefits would be improved by the provision of a cost comparison of a new natural gas combined cycle plant with a new wind plant, especially in light of potential retirement of current generation assets.

8. As depicted and addressed in Chapter 8, a big driver in cost reductions, relative to the current Main Tier procurement structure (REC-only), is the utility-backed PPA.

- a. *In a bundled PPA model, who should enter into PPAs with developers? A public entity or the investor-owned utilities?*
- b. *If utilities, should they be compensated in return for taking on the financial obligations of PPAs to support project financing? If so,*
 - i. How should the amount of remuneration be calculated?
 - ii. What would be the specific basis for the amount of remuneration?
 - iii. What limitations, if any, should be placed on such remuneration?

EDCs SHOULD BE THE SIGNATORIES TO PPAs WITH DEVELOPERS

Electric distribution utilities should enter into the PPAs with developers. These credit-worthy entities have the ability and experience to enter into PPAs and are already active participants in the wholesale markets, so would be able to liquidate the energy in the wholesale markets when necessary.²⁸ Designating EDCs as contract signatories will bring the full hedging value of the PPAs more directly to New York ratepayers. EDCs are the signatories to PPAs with independent producers of renewable energy in several states with successful RPS programs, including California, Massachusetts, Maine, Connecticut, and Rhode Island.

UTILITIES SHOULD BE RENUMERATED BASED ON ACTUAL COSTS INCURRED

We support an LSR Program structure in which EDCs collect the anticipated costs of the LSR PPAs, potentially through a transparent charge on all distribution customers beginning in 2016. In this case, the utilities would retain these funds until they incur costs under the PPAs. The costs associated with the PPAs would be based on the estimated LSR premium, based on calculations comparing the PPA cost to the wholesale price that otherwise would have been paid for the energy at that time. In

²⁸ Clean Energy States Alliance, *Recommended Principles and Best Practices for State Renewable Portfolio Standards* (2009): 6. <http://www.cesa.org/assets/Uploads/Resources-post-8-16/Principles-Best-Practices-RPS-2.pdf>.

years when the PPAs result in savings rather than costs, these funds should be recycled into subsequent annual LSR solicitations, until such time as renewable energy procurement targets, or milestones for interim years, are achieved. At that time, the collected funds should be returned to ratepayers via bill credits.

The utilities should receive clear and unambiguous assurances in the LSR Program that the costs to utilities will be limited by the conditions of the PPAs; that the costs of the PPAs will be recovered by utilities from ratepayers; and that the risks associated with underperformance or high operating and maintenance costs of the renewable generation assets will be borne by the generators, and not by the ratepayers. In this way, the risks to utilities are minimized. Any costs that utilities incur through their own internal administration of the LSR Program should be recovered in rate cases. Under this approach, the specific remuneration to EDCs would be based on, and limited to, the actual expenditures of the EDC for the LSR Program.

9. Chapter 8 discusses a back-loaded budget approach over a 10-year period to estimate the quantities of LSR resources that could be deployed under the three primary design structures discussed in Chapter 6, using wind energy as a proxy.

- a. Are these assumptions and budgets reasonable to consider for an LSR program? If not, please explain.*
- b. Is back-loading expected procurement expenditures a reasonable way to balance objectives of costs and deployment of new LSR resources? If a different expenditure profile is preferred, please explain the approach and the rationale.*

LSR BUDGET SHOULD BE CLOSELY LINKED TO RENEWABLE ENERGY GOALS; NYSEDA SHOULD PROVIDE SCENARIO ANALYSES RELATED TO 50% GOAL

Section 8.4 of the Options Paper discusses annual expenditures and collection impacts. This section uses \$1.5B, a similar level of investment as the cumulative ten

years of the RPS Main Tier, “as an analytical benchmark.”²⁹ In setting the actual budget, as discussed elsewhere in these comments, we favor a specific percentage target. If a budget-based program is used, the budget should be directly linked to the 50% renewable energy target included in the State Energy Plan. We request that the Commission, working with NYSERDA, provide analysis to the public regarding scenarios to achieve the 50% renewable energy goal, and the portion of that goal projected to be met by the LSR Program versus other policies (REV, voluntary market, NY-Sun, legacy tier, etc.). In the absence of such an analysis, we assume that the 3.4 GW of deployment predicted under the \$1.5B investment level, assuming base market prices, as shown in Table 6, is not at all adequate to meet the 50% goal, even assuming, as a benchmark, that the LSR Program would be responsible for 15-20% of total load.

INVESTMENTS SHOULD BE EVENLY DISTRIBUTED OVER TIME

We do not support back-loading of expenditures at a budget level of \$1.5B, because the investment of \$100M per year for the first five years will not appropriately balance the desire to minimize cost impacts with the need to stimulate the development of new renewable energy generation projects in the near term. For purposes of comparison, the average solicitation level in the nine solicitations of the RPS Main Tier was over \$161.5M,³⁰ and the proposed budgetary level would be significantly less. The development process takes time, and in order to ensure a robust and competitive response to solicitations, as well as the entry of new projects in the NYISO interconnection queue that match the timing of generation retirements, developers will need an adequate incentive. Based on Figure 20 in the Options Paper, the \$100M investment level procures significantly less than 200 MW per year for each of the first five years, which is less per year than has been achieved, on average,

²⁹ Options Paper, p. 109.

³⁰ The funding commitments associated with the RPS Main Tier solicitations have been (1) \$173.6M, (2) \$266.3M, (3) \$118.6M, (4) \$96M, (5) \$204M, (6) \$191M, (7) \$132M, (8) \$66M, and (9) \$206M. The average for these nine solicitations was \$161.5M.

over the ten years of the RPS Main Tier.³¹ At a budget of \$2B, for example, it may be appropriate to allocate \$150M annually to solicitations for 5 years and \$250M annually to solicitations thereafter. At a \$1.5B budget level, our strong preference would be a level distribution of \$150M per year in the belief that the benefits of early deployment and pipeline development offset the overall 200 MW reduction in total procurement predicted in Figure 20. Further, this 200 MW differential may disappear over time as costs decline and lessons are learned from projects developed earlier in the pipeline.

The benefits of back-loading are premised on the assumption that electricity prices will go up, however the model in Table 6 shows a scenario in which electricity prices decrease. While we support relying on modeled predictions for analytical purposes, given this uncertainty it is a weak rationale for back-loading investments. Finally, back-loading seems redundant to the other cost containment mechanisms listed in Chapter 5, section 5.4.9. If a budget-based program is used, the budget itself already serves as an adequate cost containment component of LSR Program design.

10. Chapter 9 discusses policy options that should be considered for legacy Main Tier resources that will continue to produce energy and RECs after the expiration of their contract with NYSERDA, the first of which expire in 2016.

- a. Should the State continue to procure RECs (or energy and RECs) from these legacy projects? If so, why and by what mechanism?*
- b. Should the State provide support for the vintage (pre-2003) fleet of small hydroelectric facilities and biomass facilities currently eligible for support under the current Maintenance Tier of the RPS program? If so, by what mechanism?*

³¹ The capacity associated with the RPS Main Tier solicitations has been (1) 343.8 MW, (2) 649.5 MW, (3) 149.8 MW, (4) 82.1 MW, (5) 139.1 MW, (6) 409.0 MW, (7) 86.4 MW, (8) 46.3 MW, (9) 155.4 MW. The average for these nine solicitations was 229 MW.

THE STATE SHOULD CONTINUE TO PROCURE LEGACY LSR; THE MAINTENANCE TIER SHOULD BE REPLACED BY A LEGACY TIER IN NEW LSR PROGRAM

While the first job of the new LSR Program will be to ensure that new clean and cost effective resources come on line in New York, it is essential that past progress is not lost. In that spirit, we urge that the program include a mechanism regarding legacy LSR that obligates utilities to procure privately owned pre-2015 renewable energy that qualifies for the existing RPS Main Tier or Maintenance Tier. This legacy tier would require investment beyond the proposed \$1.5B. As described in the Options Paper, many renewable energy generation facilities that operated in New York prior to 2015 will have the option of leaving the New York market to participate in the RPS markets of nearby states. Already, in the 5% of a project that is earmarked for the voluntary market, many RECs flow to more lucrative markets rather than staying in New York, and the Options Paper appropriately expresses concern that RECs from projects with expiring Main Tier contracts could do the same. Additionally, other renewable sources that provide uncompensated benefits to New York may also experience revenue deficiencies, making them uneconomic and in danger of being decommissioned. With the advent of the federal Clean Power Plan and potentially new transmission capacity from the NYISO to adjacent service territories, it is assumed there will be an even greater market, although not unlimited, outside of New York for any uncontracted renewable energy attributes.

As stated in the Options Paper, this has negative implications for New York: “*The State would lose the ability to claim that renewable energy supply towards RPS goals, as the right to make such claims accrues to the rightful purchasers of the associated RECs*” and legacy LSR exports would “*Negatively impact New York’s compliance with the Clean Power Plan (EPA 111(d) targets).*” For these reasons and as summarized in the Options Paper, the LSR Program should include elements to replace the current RPS Maintenance Tier. Doing so via a utility obligation using a tiered approach would address the dual policy goals of incenting new renewable energy development and keeping this vintage renewable energy participating in the New York market. EDCs could be obligated to purchase a specified amount of

renewable energy from a legacy tier, defined as privately owned renewable energy (i.e. eligible under the existing RPS) generation operating in New York prior to 2015.

The legacy tier should be technology-neutral with respect to eligibility, i.e. all legacy LSR, whether solar, biogas, wind, sustainable biomass, hydro, or fuel cells, as they all provide the same benefits: carbon-free production of energy. The size of the legacy tier should grow over time as more NYSERDA REC contracts expire.

We recognize that creating a tier for legacy LSR might present challenges with respect to limited competition (if, for example, the amount that EDCs are obligated to purchase is close to equal to the vintage generation capacity) that would need to be mitigated in order to maintain competition and control costs. We also recognize that a tier for legacy LSR brings budgetary challenges with respect to the total amount of ratepayer investment and achievement of the overall renewable energy goal of 50%. To address these concerns, New York could implement a tiered approach that involves a separate budget (beyond the budget for new grid-tied resources that is linked to achievement of the percentage goal) and a separate procurement process that is coordinated by the State with the EDCs as obligated entities. The legacy procurement process could issue periodic offers for legacy LSR under a term PPA for bundled energy and/or for short or long term REC contracts. The procurement process could also provide the option to legacy generation owners to forego the standardized offer and utilize a process similar to the current Maintenance Tier to develop a customized price that offers a rate of return necessary to ensure the renewable energy generation stays online in the face of challenging economics, provided it meets a cost/benefit ratio deemed prudent by the State. In negotiating a customized price, the procurement entity should consider results from new project bid rounds and consider various criteria, including economic benefit, system benefits, fuel diversity, the opportunity cost of participating in other REC markets, and a project's capital and operational costs.

For those legacy resources that are not eligible or desiring to enter into long-term PPAs for bundled energy or for RECs, there should be the final option of being able to sell those RECs into the voluntary market.

The Options Paper captures the key issues regarding legacy LSR when it states “*If New York State wishes to retain Legacy LSR production in-state to support fulfillment of its policy objectives or federal requirements, there is a tension between this desire and the need to do so at minimum cost to ratepayers.*” In response, we wish to reiterate our position that New York State does indeed need to develop policy to retain legacy LSR, for all of the reasons articulated in the Options Paper, and our belief is that this can be done at minimal cost to New York customers. The Options Paper does not include a detailed discussion or a proposal on how this policy should be structured; this issue should be clarified and a detailed proposal developed by the Commission for public comment.

11. Chapter 9 provides an overview of the voluntary market for LSR and opportunities for its growth.

- a. Are these models appropriately considered? If not, why?*
- b. Are there other policy considerations that should be examined in an effort to integrate voluntary participation and stimulate the voluntary market for renewable energy and “brown power” hedges? If so, please explain.*

MODELS TO ANIMATE VOLUNTARY MARKET DESERVE FURTHER EXPLORATION

Section 9.2.4 of the Options Paper discusses the voluntary market for renewable energy. We agree that development of the voluntary market has been a largely unrealized policy goal in New York State. The voluntary market was allocated 11% of New York’s 2015 RPS goal (30% renewable energy by 2015).³² The Options

³² According to the March 2015 NYSERDA report *New York State Renewable Portfolio Standard Annual Performance Report through December 31, 2014*, Figure 1, the voluntary market was allocated 11% of the overall RPS goal. Assuming the overall goal is 12.2 million MWh, the voluntary market component, outside of Long Island, was set at 1.6 million MWh. The total voluntary purchases were 1.8 million MWh, but this included LIPA and

Paper identifies four potential motivations for actors in the voluntary market: meeting internal corporate or institutional goals, reducing greenhouse gas emissions, increasing goodwill, and acquiring a hedge against volatile electricity prices. Any state policy interventions to stimulate the voluntary market need to be responsive to these motivations. These interventions should be integrated with the new LSR Program in a way that is additive and complementary rather than competing.

After identifying the barriers to growth of the voluntary market, the Options Paper suggests a structure for double-sided solicitations, whereby the State (or EDC) would procure renewable energy and RECs through a long-term PPA and sell that energy, under a shorter-term agreement, to the voluntary market. After identifying some of the complexities with this approach, the Options Paper goes on to suggest a simplified “Indirect, Separate Buy/Sell Solicitation” approach in which the State buys energy and/or RECs through a competitive solicitation, and the State sells that energy and/or RECs through the voluntary markets in a separate transaction. We support further exploration of this second model.

One of the critical components of a successful voluntary market is the trust voluntary buyers have that their purchase is indeed additive to what would otherwise occur, especially given their likely interest in claiming supplemental GHG reductions and building goodwill. This must be a critical element of New York’s voluntary market policies as well. This potential program – i.e. in which NYPA, for example, enters into long-term PPAs and resells renewable energy to “volunteers” – will have to be additional and separate from the main portion of the LSR Program paid for by all ratepayers, using a planned budget that is linked to a specified renewable energy goal. We suggest that policy interventions to stimulate the voluntary market in New York should strive for consistency with the Center for Resource Solutions and the Green-e Program. This will ensure that voluntary purchasers are confident they are purchasing a credible green product, and will make New York’s voluntary program

baseline purchases for 2012. Voluntary purchases outside of Long Island appear to be .4 million MWh in 2012 (per page 6 of the 2015 RPS Performance Report), just roughly 25% of the allocation for the voluntary market.

compatible with other state and international voluntary markets. If New York creates definitions of environmental commodities in a way that is incompatible with other markets, it is less likely to attract the largest and most sophisticated purchasers.

Assuming the critical element of additionality will be achieved, we believe the model for stimulating the voluntary market deserves further exploration and development of a specific proposal for public response. Such a proposal could specify, for example, whether a state agency or the EDC would be the designated “single buyer;” the initial source of funds for this program; the appropriate level of investment; a legal analysis of agency authority; whether only new or also vintage renewables would be eligible; and other logistics. Because this proposal deserves another round of assessment and input, it would make sense for this component of the LSR Program to be a part of a second track, especially if legislation is required.

We further suggest that as part of the “leading by example” strategic pillar described in the State Energy Plan, New York consider becoming the first volunteer purchaser in a program administered by NYPA. Since the expiration of Executive Order 111, New York State agencies – including CUNY and SUNY – have not been directed to purchase renewable energy. In order to lead by example, help the State achieve its overall 50% goal, and test the proposed mechanism for stimulating the voluntary market, New York could commit to purchasing renewable energy from NYPA for its own electricity load, and NYPA should enter into bundled PPAs to cover that demand, and then resell the renewable energy to State agencies.

Another option for stimulating the voluntary market would be for the State to offer either a reward or recognition to private entities that voluntarily purchase energy from LSRs through PPAs with generation owners. This could take the form, for example, of a state recognition program or a preference for these entities in other state procurement and contracting processes. Finally, the issue of facilitating the voluntary market should be kept in mind during RGGI state negotiations that may occur in response to the Clean Power Plan, because increasing the set-asides for the voluntary

market in the RGGI budget could also potentially help stimulate the voluntary market in New York.

12. Chapter 9 provides a qualitative discussion on potential opportunities to consider wholesale energy market reforms to more explicitly reflect the value of LSR resources.

- a. Is this an appropriate option to seek and consider? If not, why?*
- b. If yes, what new mechanisms can be put into place by the Commission to more explicitly reflect the value of the benefits of LSR resources in wholesale markets?*
- c. If yes, how does federal policy affect this option?*
- d. Could these reforms lead to overall lower cost to consumers compared to the other options discussed in Chapter 6? If so, please explain.*

POTENTIAL MODIFICATIONS TO THE NYISO MARKETS SHOULD BE ANALYZED

Section 9.3 of the Options Paper rightly highlights that the NYISO wholesale markets, including the energy, capacity, and ancillary services markets, do not completely internalize the environmental attributes of renewable generation, nor do they value the fuel diversity or price volatility reduction attributes of renewable, fuel-free and carbon-free generation. For example it states, “*These markets also do not explicitly recognize the value of price reductions that resources such as wind can offer to the system,*” and, “*... markets do not explicitly value fuel diversity benefits that a resource may bring to the electric system, leading to the concern that the system may become overly dependent on natural gas.*”³³

This section of the Options Paper goes on to suggest that new market mechanisms could be designed to value the benefits of LSR resources and compensate generation owners for those values, through modified or new market products. This is an

³³ Options Paper, p. 124.

intriguing concept that deserves further analysis (which was not included in the Options Paper).

Further research and analytical modeling is necessary to determine if changes at the competitive wholesale markets could in fact more affordably or effectively facilitate the entry of new renewable generation into the New York market, as compared to the preferred option described in more detail in the Options Paper (i.e. using bundled PPAs between EDCs and generators, facilitated by a state procurement process). Absent this analysis, our assumption is that these undefined changes would not be sufficient to scale the LSR sector on its own, especially to the levels necessary to achieve public policy goals in the near term. These market mechanisms would undoubtedly require not only this type of analysis but also a detailed examination through the NYISO governance process and the consideration of any federal legal issues that may arise, which would be a time-consuming process.

For these reasons, we strongly support further analysis of potential wholesale market changes, but not in a way that will delay implementation of the core option presented in the Options Paper. As such, this analysis should take place on a separate track. In any case, changes at the wholesale market to compensate renewable energy for its unique attributes would make the core option for the LSR Program outlined in the Options Paper more affordable and able to further maximize generation within a planned budget, and therefore would be fully complementary rather than redundant. This two-phased approach could create a transition phase for renewable generation to future wholesale parity.

NYISO SHOULD EXEMPT RENEWABLE GENERATION FROM BUYER-SIDE MITIGATION

We also note that more modest changes at the NYISO could help facilitate increased renewable energy development and thereby also make the LSR Program more affordable and efficient. One change would be to exempt renewable energy generation from buyer-side mitigation. This policy change was most recently

proposed in a NYPA complaint to FERC,³⁴ and was supported by ACE NY, the American Wind Energy Association, the City of New York, and the Natural Resources Defense Council. Support for this proposed change is consistent with the goals of the LSR Program and could better allow renewable generation to fairly participate in the NYISO capacity market without getting penalized for having contracts with end users, whether REC-only or bundled PPAs resulting from the new LSR Program, or with off-takers in the voluntary market.

NYISO SHOULD MODIFY THE INTERCONNECTION PROCESS TO SYNCHRONIZE WITH ARTICLE 10

Under the NYISO's Open Access Transmission Tariff (OATT), a proposed large facility, such as a wind project, is required to proceed through three successive interconnection studies. First is the Interconnection Feasibility Study; second is the Interconnection System Reliability Impact Study; and third is the Class Year Study. The Class Year Study evaluates the cumulative impact of a group of projects that have met specific eligibility requirements by a certain date. The average duration of the NYISO Class Year Study has been eighteen months, although that could be reduced going forward due to changes in NYISO processes. In order to enter a Class Year Study, NYISO has to approve the project's Interconnection System Reliability Impact Study, and the project has to have achieved a regulatory milestone. The current regulatory milestone is an Article 10 application that has been deemed complete by the Article 10 Siting Board.

The minimum timeframe for an application to be deemed complete in the Article 10 process is 300 days, although the actual timeframe will likely be longer. Given that both the Class Year Study and the Article 10 process are both lengthy and significantly outside of the applicant's control, it would be both efficient and consistent with state policy promoting renewable energy to have these processes occurring on simultaneous, parallel tracks.

³⁴ Complaint of the New York Public Service Commission, New York Power Authority, and New York State Energy Research and Development Authority, FERC Docket No. EL15-64-000 (May 8, 2015).

Under the current regulatory milestone, the Class Year Study and Article 10 processes are not well synchronized, and significantly delay project development. For example, the Article 10 application requires that a project be fully planned, studied and analyzed, yet the NYISO interconnection process can affect the final size and configuration of complex renewable energy projects such as wind farms, and therefore must be significantly advanced before an application can be submitted. If the results of a NYISO Facility Study performed as part of Class Year Study lead to changes to a project, it could require amendments to the Article 10 application or changes to environmental studies that must be performed during certain seasons.

As mentioned above, the Class Year Study has consistently required longer than a year, averaging eighteen months. Though recent NYISO Interconnection Queue improvements have been made to improve this process by adding new entry points, if a project misses the opportunity to enter a particular Class Year Study, the project will experience a minimum delay of one year. Coupled with the potential application amendments due to project alterations based upon the Facility Study, this could significantly delay LSR development and the achievement of New York's 50% renewable energy goal. Delays also add to overall project costs.

Prior to the adoption of the current version of the Article 10 siting process, proposed renewable energy projects (and non-renewable projects) were subject to review under the State Environmental Quality Review Act (SEQRA) and the regulatory milestone necessary for entry to the Class Year Study was the acceptance of a Draft Environmental Impact Statement (DEIS) by the lead agency. The intention of the regulatory milestone is to ensure that a project placed into the Class Year Study is a serious endeavor for which there has been significant investment and is likely to be built within a certain timeframe. The Article 10 Preliminary Scoping Statement (PSS) is a major step in the permitting process that demonstrates a significant investment by the applicant and a commitment to advance the project. Completion of the PSS is analogous to acceptance of the DEIS and therefore should become the regulatory milestone in the NYISO's criteria for accepting projects into the Class

Year Study. Another option for the regulatory milestone is the submittal of the Article 10 application. Either of these options would allow these two important (as well as time consuming and expensive) processes to take place on a parallel track. This would be a straightforward method of recognizing the values and attributes of renewable generation and the need to develop a robust pipeline of projects to coincide with generation retirements, and reducing clean energy development soft costs.

13. Chapter 10 provides a number of conclusions to best advance the State’s overall objective of accelerating the development of LSR resources as cost effectively as possible. These findings are also summarized in volume 1.

a. With respect to a flexible procurement structure to ensure the selection of lowest-cost projects:

- i. Should utility owned generation (UOG) be allowed to compete with privately-owned projects in an open-source solicitation?
- ii. If so, should utility participation be capped at a certain percentage of total projects or percentage of individual project ownership? At what percentage levels should these caps be set?

b. With respect to third party centralized solicitation and evaluation:

- i. In the event utilities are allowed to own any LSR projects, how could a third party administered solicitation level the playing field and mitigate the risk of bias in an open-source auction?

c. With respect to having LSR procurements be conducted based on a planned budget, system needs, and other considerations:

- i. What methodology should be used as the basis for both project selection and deployment levels?
- ii. Can the procuring entity integrate LSR resources with distributed energy resources, such as storage and demand response, to increase the system and customer benefits of integrated system planning?

UTILITIES SHOULD NOT BE ALLOWED TO OWN AND RATE BASE GENERATION

The Commission should not allow utility-owned generation, however the Commission could allow utility affiliates to compete with privately-owned projects in

an open-source solicitation, so long as there are sufficient safeguards in place to help mitigate utility self-dealing and conflicts of interest.

UOG introduces many conflicts and counter-productive dynamics that stifle competition and place ratepayers at risk. Through ownership of both generation and transmission and distribution (T&D) infrastructure, the utility is both empowered and incentivized to provide interconnection to its own facilities more quickly and on more preferential terms than would apply to others, and to operate its transmission grid to favor its generators' output over that of other market participants. Ensuring that procurements are conducted competitively and fairly increases in difficulty and complexity with UOG, because safeguards would be needed to ensure that the utility does not leverage its privileged position in terms of system knowledge and operations to unfairly position its bid ahead of others. Procurements in these circumstances must be conducted with greater vigilance and oversight, introducing costs and additional process. Even with oversight, utilities may still have the upper hand in these procurements due to asymmetrical information between both the bidders (utilities and developers) and the regulators and the utilities. Utilities are driven to increase capital expenditures (i.e., build generation) and not necessarily to operate plants efficiently and maximize output. Increasing output and efficiency through competition was one of the drivers behind restructuring in New York. Under a UOG scenario, the risk of underperformance will be borne by the ratepayers rather than the generation owner, unlike with PPAs where the risk is borne by the generation owner. Further, when utilities rate base these assets and rely on captive ratepayers to receive preferential financing that is not available to other developers, they undermine competition and the greater efficiency that it brings to the market.

The discussion in the Options Paper plays down the many potential disruptive impacts of allowing UOG. The Options Paper suggests that including UOG would increase competition since it would increase the variety of available procurement options. In reality, it would stifle competition, since it would provide utilities a procurement mechanism where they have advantages that cannot be mitigated.

Utility ownership of generation introduces conflicts of interest by blurring the roles of market participants in New York's restructured market. With the conflicts of interest introduced by allowing UOG, even though they might be partially mitigated by some of the measures discussed in the Options Paper, the market will never function as well as if these conflicts had never been introduced in the first place. Corrective measures, such as third-party oversight, administrative action, and installing internal firewalls, all have costs in terms of time and process efficiency, and any purported benefits of UOG need to be weighed against the costs and risks associated with actions taken to address these new conflicts of interest that could undermine a competitive market.

The Commission relied on many of these concerns when it issued its 1998 Statement on Vertical Market Power.³⁵ While that statement was targeted at overcoming conflicts of interest when an unregulated affiliate owns generation in its affiliated utility service territory, the concerns addressed in the statement are even more relevant and increase in severity when generation is owned directly by the regulated utility. It is not reasonable, therefore, for the Commission allow UOG when the concerns in the statement are still valid.

Many concerns over unregulated affiliate ownership of generation in a utility's territory can be mitigated. Affiliate ownership should be allowed so long as it is accompanied by the protections laid out in the Options Paper (pages 74-75). There are several differences between affiliate ownership and utility ownership that make affiliate ownership an acceptable option when appropriate controls are in place. Affiliates would not be able to rate base their investments and would sell their production via a PPA, which appropriately assigns risk of underperformance to the generator rather than the ratepayer. There are long-standing barriers between the utility and the affiliate that, when they are strictly adhered to, help level the playing field by limiting the affiliate's access to non-public system knowledge and operational assistance. These barriers also help prevent conflicts of interest from

³⁵ *Cases 96-E-0900 et. al. Orange & Rockland Utilities, Inc. – Rate Restructuring*, App. I, Statement of Policy Regarding Vertical Market Power (July 17, 1998).

forming by preserving the distinct roles that electric distribution companies and independent power generators play in New York's restructured market.

SOLICITATIONS SHOULD BE ADMINISTERED BY A THIRD PARTY

With respect to question 13.b, we oppose utility ownership of generation because we do not believe that there are sufficient measures available, including third-party administration, that are able to level the playing field in solicitations in the case of UOG. We also do not believe that the issues raised in the Options Paper in section 6.4.2.1 regarding comparability between UOG bids and bids for utility-backed PPAs can be easily overcome, and a less complex approach, and thus more feasible and acceptable approach, would be one that allows only bids by independent renewable energy developers and utility affiliates. Our preferred option, however, still includes a procurement process coordinated by a state entity, including the solicitation, evaluation and selection process, in order to reduce market power concerns with utility affiliates' participation. The third party should ensure that project selection is conducted on a pre-established set of criteria: price, economic benefit, and renewable energy procurement goals. This is critical in addressing the concerns raised with utility affiliates owning generation, as described in the Options Paper in section 6.4.1.5. It is also a more efficient approach that will reduce overall transaction costs and benefit from the experience that the State, namely NYSERDA, has gained in renewable energy procurement over the last ten years. Additionally, it will ensure procurement of a diverse set of resources that maximizes energy diversity, locational values, system benefits, and economic benefits. In a structure where system benefits and locational values are integrated into a generation owner's bid, and bid prices are evaluated based on the expected premium, system benefits would affect project selection even if the selection criteria in the LSR solicitation are limited to price and economic benefits.

PROJECT SELECTION SHOULD BE BASED ON PRICE AND ECONOMIC BENEFITS; DEPLOYMENT LEVELS SHOULD BE BASED ON RENEWABLE ENERGY GOALS

Question 13.c.i asks what methodology should be used for selecting projects and deployment levels. Our position is that project selection should be based on price and local economic benefits. Deployment levels should be based on the amount necessary to achieve renewable energy procurement milestones in a particular year. As mentioned elsewhere, if each solicitation is based on a planned budget, that budget should be analytically linked to the renewable energy generation necessary to achieve the 50% goal, based on modeling of what portion of the 50% will be achieved through energy efficiency, distributed resources, and large-scale renewables.

This question references the fourth “program design principle” included in the Options Paper, which is, “*Procurements conducted based on a planned budget, system needs, and other considerations.*” This is the least clear of the design principles presented in the Options Paper. The Options Paper states, “... *selection should take into account not just price but also total expenditure targets, system requirements, plant retirements, current and forecasted electricity prices, technology cost trajectories, end-user demand, and the minimum level of annual investment necessary to achieve policy objectives.*” This statement raises many questions for which the Options Paper provides few answers; it is a topic that needs more clarity. In this context, we again raise the importance of long-term certainty and transparency in this program. A clear approach, for example, would set an annual schedule for solicitations for a set renewable energy target, potentially using a planning budget and/or a cost cap. The planning budget and cost cap could be determined based on the amount necessary, based on projections of electricity prices and modeled PPA costs, for annual procurements that put New York on the pathway to 50% renewable energy generation by 2030. If a budget-based program is used, the budget for each solicitation over the course of the ten-year horizon should be publicized at the beginning of the program. Recognizing that the projections and models will change over time, there should be a reevaluation every three years addressing whether or not

the annual budgets are achieving the scale of development necessary to get to 50% and interim milestones.

Once a budget is set for a particular solicitation, it doesn't seem as necessary to base project selection on all of the factors listed above (e.g. total expenditure targets, plant retirements, forecasted electricity prices, technology cost trajectories, end user demand), as much as the level of renewable energy procurement needed, the bid price, and local economic development benefits.

There is a valid rationale for also considering system benefits in the selection criteria. This could include, for example, the benefits of an offshore wind project or biogas project close to load or in an area with capacity needs, or the time-of-day production benefits of a solar project. This would be consistent with the principles of REV to value/monetize the comprehensive system benefits of a particular generation proposal, and is an aspect of the design of the new LSR Program that should be explored further, with two caveats. First, our strong preference is for a market-based and objective means of evaluating and ranking individual generation projects for consistency with REV priorities rather than trying to capture these values through subjective or qualitative metrics. For example, one approach that would allow recognition of projects with greater locational or temporal benefits would be to base bid selection on the "implied REC" or required premium within the bundled offer price. The implied REC is simply the bundled offer price less the expected market-based revenues the project will realize for energy, capacity and ancillary services. Because projects that are more advantageously located within constrained areas will receive higher capacity value, and those that are more peak-oriented will fetch higher total revenues in the forward energy markets, all else equal, these projects will require a lesser premium. Second, valuation of system benefits – or other criteria for project selection – needs to be balanced with the imperatives of certainty, transparency, equity, and long-term planning. Given the long development and permitting timeframe for all renewable energy technologies, it would be inefficient and disruptive if the criteria for selecting bids changed from each solicitation to the next.

This would be impossible for developers to respond to in a reasonable timeframe and would have the effect of discouraging investors and developers from entering the New York market.

Finally, question 13.c.ii asks if the procuring entity, which we believe should be EDCs, could integrate LSR resources with DER like energy storage and demand response. Member companies of the signatory organizations are interested in this possibility and do believe that storage can have an important role in supporting an LSR Program through provision of system benefits like improving power quality and mitigating congestion and curtailment challenges.

IV. CONCLUSION

The Renewable Energy Industry, as represented in this submission as the Alliance for Clean Energy New York, the American Wind Energy Association, the Advanced Energy Economy Institute, the Solar Energy Industries Association, the New York Solar Energy Industries Association, and New England Clean Energy Council, strongly supports New York State's pursuit of a new large-scale renewables policy to replace the expiring Renewable Portfolio Standard Main Tier. Our organizations and member companies believe that New York can emerge as a strong market for large-scale renewables and we look forward to further activity and investment in New York State.

For nearly 10 years, New York State has pursued large-scale renewable energy development through the RPS Main Tier, with notable success: 65 contracted projects for 2,035 MW of new renewable capacity; program costs "expected to comprise less than .2% of total retail electricity expenditures;" and taking into account wholesale electricity price reductions resulting from the program, a cumulative net rate impact "projected to be essentially zero."³⁶ The new generation facilities have proven the benefits of this investment by keeping energy dollars in-state; prompting local economic development;

³⁶ NYSEDA, *New York State Renewable Portfolio Standard Annual Performance Report Through December 13, 2013, Final Report* (March 2014): 5.

reducing the carbon emissions; diversifying New York's electricity supply in a market increasingly dominated by natural gas; providing long-term price stability in electricity supply; and avoiding the air pollution that contributes to smog and acid rain.

With the mechanisms outlined in the Options Paper, especially Option 3A, New York has a truly promising opportunity to build on this success by increasing the scale of development while continuing to have a program that minimizes costs. By utilizing the State's procurement administration experience, combined with the EDC's ability to enter into long-term bundled power purchase agreements, New Yorkers can have a program that maximizes diverse benefits – including price stability – and minimizes costs.

A critical design element of this program is the level of investment, and how the program will balance cost containment with certainty of demand. The Renewable Energy Industry supports a target-driven approach that ensures New York is on the path towards meeting its 50% renewable energy goal by 2030. A clear, target-driven renewable energy policy has proven successful in other states; this type of approach is competitive and market-driven, and stimulates private sector investment to achieve a clean energy future, all characteristics reflected in the principles of New York's State Energy Plan. In any case, if a budget-based policy is utilized, the budget should be based on the level projected to be necessary for New York to achieve the 50% goal.

Our organizations and member companies appreciate the opportunity to comment on the Options Paper and look forward to a continuing, productive dialog.

Respectfully submitted,

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