The American Wind Energy Association (AWEA), the Alliance for Clean Energy New York (ACE-NY), and the Natural Resources Defense Council (NRDC) appreciate the opportunity to respond to the Notice Soliciting Comments on the AWEA/ACE-NY March 12 Petition requesting that the Public Service Commission (Commission) authorize the New York State Energy Research and Development Authority (NYSERDA) to implement an Indexed Renewable Energy Credit (REC) procurement mechanism.

In the time between when AWEA/ACE-NY filed this petition and the present, New York has taken another giant step forward. On July 18, 2019 Governor Cuomo signed the Climate Leadership and Community Protection Act (CLCPA), which sets the State’s electric sector on a course to 70% renewable energy by 2030 and zero emissions by 2040. The CLCPA’s goals heighten the need for the State to have the procurement tools at its disposal to get renewable energy built in New York, at scale, on schedule, and at the lowest possible cost to ratepayers.

To a large extent, the March 12 Petition has already put forward AWEA/ACE-NY’s views regarding the seven questions posed by the Commission in the August 8 Notice, and NRDC’s April 12 comments provided additional analysis in support of the AWEA/ACE-NY petition. Below, we have attempted to respond to the Commission’s questions as concisely as possible, providing additional information where warranted.
Question 1. Are there specific benefits, challenges, and/or considerations that should be addressed in considering the proposed Indexed REC procurement mechanism?

Question 3. Would an Indexed REC structure lower financing costs for renewable generators and lead to lower and less volatile prices for consumers?

The economics of wind and solar are distinguished by comparatively high capital costs and comparatively low operating costs, relative to fossil fuel generators. Because of that basic fact, the levelized costs of wind and solar are uniquely sensitive to the cost of capital. In turn, the cost of capital for wind and solar projects – that is, the rate of return demanded by lenders and other investors – is itself driven largely by those lenders’ and investors’ assessment of the risk that a project might be unable to meet its financial obligations through project revenues. As wind and solar have matured, technology risk and performance risk have faded in importance. But market price risk remains a key driver of the cost of capital for wind and solar. The more market price risk these projects face, the higher their REC bids will need to be. As NYSERDA has explained, “the substantial amount of market price risk that the developer assumes, even with a 20-year fixed price REC contract, likely results in bidders adding a substantial risk premium in their bids.”

As AWEA/ACE-NY observed in the March 12 Petition, past analyses by NYSERDA showed that steps to reduce market price risk can sharply reduce the State’s costs of procuring RECs and ORECs. NYSERDA’s LSR Options Paper found that without the Production Tax Credit, a wind project receiving fixed price RECs would need, on a levelized cost basis, a premium over market prices of $32.78/MWh, compared to a fully hedged project, which would require a premium of $21.42/MWh. This represents a 35% decrease in the amount of public support required to realize the project. Likewise, in its Offshore Wind Policy Options Paper, NYSERDA estimated an incremental program cost of $1.2 billion for a Fixed OREC, compared to $0.3 billion for the Index OREC – a savings of more than 75%.

Other sources have reached similar conclusions regarding the importance of market price risk to the State’s procurement costs. In 2013, the Brattle Group assessed

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2 Id. at 24.
3 Case 18-E-0071, NYSERDA, Offshore Wind Policy Options Paper (Jan. 29, 2018)
4 The estimated incremental bill impact of the Index OREC was 0.18% compared to 0.76% for the fixed REC – a savings of 76.3%. Id. at 40.
the potential savings for New York ratepayers by reducing financing costs for renewable projects through long-term contracting.\(^5\) As that report explained:

[W]e estimate that the impact of lowering the financing costs through long term contracts could be materially beneficial to New York ratepayers. Given that less than 50% of the RPS commitment by 2015 has been met, the savings to New York ratepayers for contracts awarded between now and 2015 could realistically range from $450 million to close to $1 billion.

That estimate was derived from a review of existing literature that indicated that policies that provide a more stable revenue profile reduced the levelized cost of renewable energy by 10-30%.\(^6\) Based on that, Brattle estimated that long-term contracting could reduce the cost of complying with New York’s then-RPS requirement by 10%, or $9/MWh. Savings of $9/MWh applied to the 5,103 GWh of unmet RPS demand at the time indicated potential annual savings of $44.5 million, or $445 million over 10 years.

Brattle’s analysis provides an indication of the magnitude of savings that could be realized through an Indexed REC structure. Extrapolating that study’s $9/MWh estimate to the State’s new 70% by 2030 renewable requirement indicates that reducing the financial risk of renewable development could save New York ratepayers over $500 million per year, 10 times larger than the savings Brattle calculated for meeting the state’s 30% by 2015 RPS requirement.

Specifically, in 2018 NYISO wrote: “In order to achieve the 50-by-30 goal, the PSC determined that approximately 70,500 GWh of total renewable energy will need to be generated by 2030 – including approximately 29,200 GWh of new renewable energy production in addition to existing levels of production at the time the order was adopted.”\(^7\) Extrapolating from those figures indicates that the 70% by 2030 target would require 98,700 GWh of total renewable energy in the year 2030, of which 57,400 GWh would be new renewable energy. For the level of renewable development required to meet that requirement, cost savings of $9/MWh from reducing the cost of renewable financing could yield savings for New York ratepayers of $517 million per year.

Looking forward, we expect the market price risk facing renewable energy projects to increase in its relative importance. For one, there is considerable regulatory

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\(^6\) Id. at 13

uncertainty regarding the regulation of greenhouse gases and the impacts such regulations may have on markets. Within New York State specifically, there is uncertainty whether NYISO will implement its carbon price proposal, and uncertainty whether the Federal Energy Regulatory Commission (FERC) would approve that proposal if made. More broadly, there is considerable uncertainty regarding what energy and capacity markets will look like in the zero-carbon future required by the CLCPA. The projects that will be financed and built through upcoming solicitations will be operating and making debt service payments during a period when the penetration of zero-carbon resources will approach 100%. There is no precedent for what that marketplace will look like. And, therefore, lenders and investors will likely make the most conservative possible assumptions. Those conservative assumptions will come in the form of a risk premium built into each generator’s Fixed REC bid.

Those opposed to Indexed RECs sometimes argue that indexation “shifts” risk from generators to consumers. This argument is fundamentally mistaken. Indexation does not shift risk from one party to another, it reduces the overall risk that must be allocated between the parties. This is not in a situation where parties to a contract are deciding how to allocate risk that is exogenous to the transaction itself – like when a buyer and seller decide who will bear the cost of force majeure events that neither control. Rather, the risk at issue is price volatility, which can be mitigated through the structure of the REC agreement itself. Indeed, by indexing REC values, the State can, to a mathematical certainty, decrease price volatility to both generators and consumers. Consumers will see less price volatility for the simple reason that the Indexed REC value will move in the opposite direction of wholesale prices.

**Question 2. Is the proposed Indexed REC structure an appropriate pathway to address NYISO market changes and potential market reforms?**

Nothing in the Indexed REC structure will negatively affect the NYISO market. The Commission reached this same conclusion in its Offshore Wind Order when it stated that the Index OREC “meets the concerns of the NYISO” to “preserve incentives to respond to market conditions.” As AWEA/ACE-NY explained in more detail in the March 12 Petition, an Indexed REC is not a contract for differences, and would be structured in a way that ensures each generator sees the right market price signal for purposes of its market decisions, such as when to dispatch and where to locate.

Nor would the Indexed REC structure have any adverse effect on potential reforms to the NYISO market. To the contrary, the possibility of market reforms –

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9 See March 12 Petition at 12 – 14.
including carbon pricing and structural changes to the capacity market, among others – is itself another powerful reason to prefer the Indexed REC. That is because, if developers perceive uncertainty in whether and how those changes will affect market prices, they will tend to build risk premia into their Fixed REC bids. The Indexed REC allows developers to bid a strike price that is robust to regulatory changes that could impact market prices.

We note that the Commission’s recently launched Resource Adequacy proceeding (Case 19-E-0530) is appropriately exploring the compatibility of the NYISO capacity market structure with the state’s new ambitions under the CLCPA. This also adds uncertainty to future capacity market revenue. Use of the Indexed REC approach to procurement will be helpful in maintaining progress and momentum towards renewable energy goals as the PSC determines if there should be minor or major changes to resource adequacy in New York State. As noted above, the ability of Indexed RECs to mitigate uncertainty related to market changes – including to capacity markets - makes the Commission’s inquiry in the instant proceeding highly relevant to other ongoing policy initiatives of the state and NYISO.

**Question 4.** If the proposed Indexed REC option were advanced, should NYSERDA continue to also solicit bids for Fixed REC structures? Provide any details describing the preferred process to implement such an approach, including program design, evaluation and contracting considerations.

AWEA/ACE-NY do not object to NYSERDA continuing to also solicit Fixed REC bids. For the reasons stated above, we strongly expect that the Indexed REC bids will be lower cost on a net levelized cost basis, and thus that Indexed REC proposals would prevail in a competitive procurement. Nevertheless, we see no harm in NYSERDA maintaining the authority to solicit both types of bids, especially if doing so helps to assure stakeholders who have expressed skepticism that Indexed RECs will in fact be lower cost. It is also possible to foresee new types of solicitations, such as a rolling standard offer, that could possibly be implemented more efficiently by NYSERDA as a Fixed REC contract.

We note, however, that in light of *Coalition for Competitive Electricity v. Zibelman*, 906 F.3d 41 (2018) cert. denied 139 S. Ct. 1547 (2019), and the amicus brief filed by FERC in *Elec. Power Supply Ass’n v. Star*, 904 F.3d 518, cert. denied 139 S. Ct. 1547 (2019), it is now quite clear that Indexed RECs stand on strong jurisdictional footing. Accordingly, while we do not object to NYSERDA soliciting both Fixed and Indexed REC bids, there is no longer any compelling reason to require the dual

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10 See, e.g., Case No. 19-E-0530.
Fixed/Index bid evaluation structure implemented by NYSERDA in the first offshore wind procurement that took place while those cases were still pending.

Question 5. What are appropriate Indexed REC structures to address potential implementation issues such as the derivation of a reference energy price and reference capacity price, treatment of negative locational marginal based prices (LBMPs), bid evaluation methodology, and design considerations necessary to maintain appropriate market signals and an appropriate balance of risk between developers and ratepayers? Explain which structures the commenter views as most optimal, and why.

Question 6. Are there any additional potential implementation issues associated with the proposed Indexed REC procurement structure?

Question 7. If the Commission were to direct the adoption of indexed pricing, are there changes in program implementation, project selection, or other existing program rules that would be necessary or advisable?

In the March 12 Petition, AWEA/ACE-NY proposed an Indexed REC price structure based on the PSC-approved Indexed OREC methodology.\textsuperscript{11} The Indexed REC price would, on a monthly basis, net an as-bid strike against the sum of a reference energy price and a reference capacity price. The reference energy price would be the simple or “time-weighted” average of hourly prices in the applicable NYISO Zone. The reference capacity price would be monthly capacity price for the applicable Zone, translated into dollars per megawatt-hour ($/MWh) using a UCAP production factor that the generator submits with its initial bid. Reference prices should be calculated for the Zone in which the generator interconnects. As compared to a system that averages reference prices across Zones, using the Zone in which the generator interconnects will minimize basis risk and result in lower REC costs.

This system will necessitate calculating the price component of the procurement criteria on a levelized net cost basis. This is a methodology that allows comparing Indexed REC proposals in different Zones against each as well as comparing Indexed REC bids against Fixed REC bids. NYSERDA described its intention to use this methodology in its offshore wind solicitation.\textsuperscript{12} In other respects, we believe that Tier 1 solicitations could be conducted much as they had been in the past.

\textsuperscript{11} See id. at 12 – 14.

\textsuperscript{12} See NYSERDA ORECRFP18-1 (Nov. 8, 2018) at § 4.3.
Respectfully submitted on the 2nd day of October 2019.

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