

STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

At a session of the Public Service
Commission held in the City of
Albany on November 19, 2020

COMMISSIONERS PRESENT:

John B. Rhodes, Chair
Diane X. Burman, dissenting
James S. Alesi
Tracey A. Edwards
John B. Howard

CASE 15-E-0302 - Proceeding on Motion of the Commission to
Implement a Large-Scale Renewable Program and a
Clean Energy Standard.

ORDER AUTHORIZING VOLUNTARY MODIFICATION OF CERTAIN
TIER 1 AGREEMENTS

(Issued and Effective November 20, 2020)

BY THE COMMISSION:

INTRODUCTION

On August 10, 2020, the New York State Energy Research and Development Authority (NYSERDA) filed a petition (Petition) requesting authorization to provide developers, whose projects have not yet commenced commercial operation, with a one-time option to modify the price term for existing Tier 1 Renewable Energy Credit (REC) agreements. These agreements under the Renewable Energy Standard (RES) provide winning bidders with a fixed as-bid REC price (Fixed-Price) throughout the contract lifetime for the environmental attributes associated with every megawatt hour (MWh) produced by the facility. NYSERDA would allow developers who are counterparties to these existing Fixed-Price REC contracts the option to convert their price term to a variable-priced Index REC method.

According to the Petition, the Index REC method is designed to increase the likelihood that a developer will satisfy its revenue requirement for a project, reduce the financing risks and costs, and ultimately reduce the per-REC costs to ratepayers. The Petition notes that the Public Service Commission (Commission) has authorized the use of the Index REC method for offshore wind and future RES procurements, and suggests that providing an Index REC option for this other group of developers could facilitate the timely and more cost-effective completion of the subject projects. The Petition notes that this conversion option is needed to further ensure the development of some 65 renewable energy projects subject to Fixed-Price REC contracts based on the number of challenges they have encountered while awaiting final commissioning and start-up of operations. These challenges include delays in obtaining financing and permitting, tariffs on imports that have increased component costs, declining wholesale market energy prices, and most recently, the impact of the COVID-19 pandemic.

In this Order, the Commission adopts modifications to the RES to allow NYSERDA to offer each eligible project the option to convert their Fixed-Price REC price term to an Index REC price approach. The Commission directs NYSERDA to implement a specific process pursuant to which eligible developers are provided with the opportunity to convert to an Index RECs-based contract. These actions taken together have the potential to accelerate progress toward achieving the State's renewable energy goals by assisting developers that have experienced delays in their projects through no fault of their own.

BACKGROUND

On August 1, 2016, the Commission established the Clean Energy Standard (CES), which set forth specific goals for

New York's electricity to be generated by renewable energy resources.¹ To achieve this goal, the CES Framework Order established, in part, a RES Tier 1 component that requires load serving entities (LSEs) to serve their retail customers by facilitating the development of new renewable resources through the procurement of qualifying RECs. The Commission authorized NYSERDA to act as the central procurement administrator and to award long-term contracts to eligible generators through annual competitive solicitations for the purchase of Tier 1 RECs.

The CES Framework Order further directed NYSERDA to undertake these procurements by employing Fixed-Price REC contracts, whereby winning bidders would receive a fixed as-bid REC price throughout the contract lifetime for the environmental attributes associated with every MWh produced by the facility. This structure provided developers with Fixed-Price RECs for the contract term at a specific price unchanged by market conditions, while leaving energy and capacity to be sold by the developer as it sees fit, whether into wholesale markets administered by the New York Independent System Operator, Inc. (NYISO) or through bilateral arrangements.

In 2018, the Commission's Offshore Wind Order modified its approach to renewable procurements to address the limitations of using Fixed-Price REC contracts to encourage development.² The Offshore Wind Order directed NYSERDA to use a hybrid procurement model for offshore wind in which the developer was to provide both a fixed-price Offshore Wind REC (OREC) bid, similar to a Tier 1 Fixed-Price REC, and a variable-

¹ Case 15-E-0302, et al., Order Adopting A Clean Energy Standard (issued August 1, 2016) (CES Framework Order).

² Case 18-E-0071, Offshore Wind Energy, Order Establishing Offshore Wind Standard and Framework for Phase 1 Procurement (issued July 12, 2018) (Offshore Wind Order).

priced OREC bid based on the Index REC approach. Unlike a Fixed-Price REC, an Index REC is based on the developer's estimated revenue requirement for the project as represented by a strike price (i.e., an all-in price for RECs, energy, and capacity). Under this approach, the developer is paid a variable REC price that is calculated by subtracting, from the strike price, index prices for energy and capacity. This formulation is intended to increase the likelihood that a developer will satisfy its revenue requirement for a project, and ultimately reduce the per-REC costs to ratepayers. NYSERDA selected the Index OREC bids in its inaugural 2018 offshore wind procurement, and concluded that the solicitation resulted in competitive bids.³

On January 16, 2020, the Commission further incorporated the use of index-based contracts into the CES by directing NYSERDA to offer bidders an Index REC price option in future RES Tier 1 solicitations beginning in 2020.⁴ In the Index REC Order, the Commission concluded that providing an Index-REC price option would (1) give developers more flexibility to adapt their bidding behavior to their financing and operational needs, (2) reduce the risk premiums that developers account for in their bids to accommodate for uncertainty in power market

³ Case 18-E-0071, NYSERDA's Launching New York's Offshore Wind Industry: Phase 1 Report (filed October 23, 2019). NYSERDA executed contracts for two projects with an aggregate nameplate capacity rating of 1,696 MW, and estimated the average OREC cost of \$25.14 per MWh. In 2020, the Commission reaffirmed the hybrid approach for offshore wind procurements, but required bidders in future solicitations to submit either a fixed-price OREC bid or an index OREC bid, but not both. See Case 18-E-0071, Offshore Wind Energy, Order Authorizing Offshore Wind Solicitation in 2020 (issued April 23, 2020) (Offshore Wind Expansion Order).

⁴ Case 15-E-0302, et al., Order Modifying Tier 1 Renewable Procurements (issued January 16, 2020) (Index REC Order).

revenues, and (3) lower ratepayer costs on a per-REC basis. The Commission also noted that the Index REC approach would prevent the double payment for renewable attributes in the event that carbon pricing is implemented in the NYISO's wholesale energy market.

THE PETITION

NYSERDA's Petition requests that the Commission authorize a one-time option to modify the price term for existing Tier 1 REC agreements related to facilities that have yet to achieve commercial operation. The Petition notes that this conversion option would be available to 65 renewable energy projects totaling 4,312 MW with 9,622,000 MWh of potential annual generation. These projects, according to the Petition, are encountering a number of challenges, including: (1) delays in obtaining financing and permitting; (2) tariffs on imports that have increased component costs; (3) declining wholesale market energy prices; and (4) most recently, the impact of the COVID-19 pandemic. The Petition concludes that an Index REC option could facilitate the completion of these projects by both lowering risk premiums and increasing the likelihood that a developer would satisfy its revenue requirement for a project.

The Petition proposes an offer-based approach for determining the applicable Index REC strike price, whereby NYSERDA would issue a notice inviting developers with eligible REC contracts to express interest in receiving an Index REC strike price offer. For those interested, NYSERDA would set each offered Index REC strike price at a level intended to achieve a 20% reduction in the expected REC procurement costs from the project relative to the cost of the existing Fixed-

Price REC agreement.⁵ According to the Petition, a 20% reduction in REC costs equates to average savings of approximately \$4 per REC and represents an even split between ratepayers and developers of the estimated \$8 per REC savings created by the Index REC structure. The NYSERDA offer would not be negotiable, and the developer would have up to thirty days to accept or decline the offer.

The Petition also describes two potential alternatives to the offer-based approach. First, under a bid-based approach, NYSERDA would solicit Index REC strike price bids from each interested developer with eligible REC contracts. To induce competitive bidding, NYSERDA would either create scarcity in the award of Index REC conversions or impose a price ceiling or demand curve unknown to bidders. A developer that submitted a bid that NYSERDA rejects would maintain its existing Fixed-Price REC agreement. Second, under a hybrid approach, NYSERDA would offer each eligible developer the Index REC strike price in the offer-based approach, but each developer would have the option to accept the offer or reject it and counteroffer a higher strike price. NYSERDA would then determine whether to accept the counteroffer based on a volumetric limitation or a reference price ceiling unknown to the bidder. If the counteroffer was not accepted, the developer would remain in the existing Fixed-Price REC agreement.

The Petition also describes a number of proposed implementation issues that would mirror existing Commission

⁵ The inputs for calculating each project's offered Index REC strike price would be: (1) the Fixed-Price REC price term in the project's existing agreement; (2) NYSERDA's estimate of the future energy and capacity prices in the project's NYISO load zone that will determine the reference energy price and reference capacity price used in the Index REC formula; and, (3) the selected Summer and Winter Unforced Capacity (UCAP) Production Factors for the project.

directives. Under either the offer-based or bid-based approach, the Petition notes that the Index REC price would be calculated in the manner prescribed in the Index REC Order. The Index REC price would be settled monthly by netting the Index REC strike price against the sum of a reference energy price and a reference capacity price. The reference energy and capacity prices would be calculated using the same parameters identified in the Index REC Order. NYSERDA proposes to acquire RECs without compensation during any hours and at locations where the applicable real-time location-based marginal price (LBMP) is negative.

NOTICE OF PROPOSED RULE MAKING

Pursuant to the State Administrative Procedure Act (SAPA) §202(1), a Notice of Proposed Rulemaking (Notice) was published in the State Register on August 12, 2020 [SAPA No. 15-E-0302SP45]. The time for submission of comments pursuant to the Notice expired on October 13, 2020. Comments were received from Alliance for Clean Energy New York (ACE NY), Boralex Incorporated (Boralex), the City of New York (City), the Clean Energy Partners,⁶ EDF Renewables (EDF), Invenergy Renewables, LLC (Invenergy), the Joint Utilities (JU),⁷ Multiple Intervenors (MI), and Northland Power (Northland). The comments are discussed below and summarized in Appendix A.

⁶ The Clean Energy Partners are Natural Resources Defense Council, Sierra Club, New Yorkers for Clean Power, and the New York League of Conservation Voters.

⁷ The Joint Utilities are Central Hudson Gas & Electric Corporation, Consolidated Edison Company of New York, Inc., New York State Electric & Gas Corporation, Niagara Mohawk Power Corporation d/b/a/National Grid, Orange & Rockland Utilities, Inc., and Rochester Gas & Electric Corporation.

LEGAL AUTHORITY

The Commission's authority derives from the New York State Public Service Law (PSL), through numerous legislative powers related to the provision of safe and reliable energy and the development renewable energy. Pursuant to PSL §5(1), the "jurisdiction, supervision, powers and duties" of the Commission extend to the "manufacture, conveying, transportation, sale or distribution of . . . electricity." PSL §5(2) requires the Commission to "encourage all persons and corporations subject to its jurisdiction to formulate and carry out long-range programs, individually or cooperatively, for the performance of their public service responsibilities with economy, efficiency, and care for the public safety, the preservation of environmental values and the conservation of natural resources."

PSL §66(2) provides that the Commission shall "examine or investigate the methods employed by [] persons, corporations and municipalities in manufacturing, distributing and supplying . . . electricity . . . and have power to order such reasonable improvements as will best promote the public interest, preserve the public health and protect those using such . . . electricity. . ." Further, PSL §65(1) provides the Commission with authority to ensure that "every electric corporation and every municipality shall furnish and provide such service, instrumentalities and facilities as shall be safe and adequate and, in all respects, just and reasonable."

The Commission also has authority to prescribe the "safe, efficient and adequate property, equipment and appliances thereafter to be used, maintained and operated for the security and accommodation of the public" whenever the Commission determines that the utility's existing equipment is "unsafe,

inefficient or inadequate.”⁸ PSL §4(1) also expressly provides the Commission with “all powers necessary or proper to enable [the Commission] to carry out the purposes of [the PSL]” including, without limitation, a guarantee to the public of safe and adequate service at just and reasonable rates,⁹ environmental stewardship, and the conservation of resources.¹⁰ Finally, the Climate Leadership and Community Protection Act (CLCPA) amended the PSL by adding PSL §66-p(2), which requires, in part, that the Commission “establish a program to require that ... a minimum of seventy percent of the state wide electric generation secured by jurisdictional load serving entities to meet the electrical energy requirements of all end-use customers in New York state in [2030] shall be generated by renewable energy systems.”¹¹

DISCUSSION

The Commission has previously stated its concerns about the effect of wholesale market revenue volatility on potential renewable energy developments. As noted in the Commission’s Index REC Order,¹² the absence of wholesale revenue hedging in a Fixed-Price REC contract may result in developers encountering difficulties in financing projects due to the added

⁸ PSL §66(5).

⁹ See *International R. Co. v Public Service Com.*, 264 AD 506,510 (1942).

¹⁰ PSL §5(2); see also, *Consolidated Edison Co. v Public Service Commission*, 47 N.Y.2d 94 (1979) (overturned on other grounds) (describing the broad delegation of authority to the Commission and the Legislature’s unqualified recognition of the importance of environmental stewardship and resource conservation in amending the PSL to include §5).

¹¹ See, Chapter 106 of the Laws of 2019 (codified, in part, in PSL §66-p).

¹² Index REC Order, p. 3.

risk.¹³ As compared to conventional generators, renewable projects have relatively high, initial capital expenditures and relatively lower operating expenses, making them highly sensitive to the cost of capital. The cost of capital is itself sensitive to the amount of risk inherent in the development. While developers may hedge their wholesale revenues with market-based products, this revenue risk often increases the cost of project financing relative to a more fully hedged contract with a counterparty, such as a utility or NYSERDA.

These financing challenges are magnified by other exogenous factors generally outside the control of developers, including difficulties in siting, higher tariffs on component costs, and, most recently, the COVID-19 pandemic. In its comments, for example, ACE notes that existing projects with Fixed-Price REC contracts are facing economic conditions different from those in existence when NYSERDA issued its solicitation for projects subject to those contracts. While offshore wind and future RES Tier 1 developers have the choice to reduce risk by hedging wholesale market revenue uncertainties through an Index REC option, preexisting Tier 1 REC contracts that have yet to commence operation have limited options to hedge this risk outside of market products that are generally limited and relatively expensive. Linking REC prices to an index of market prices would meaningfully reduce project risk premiums and therefore lower financing costs.

Moreover, NYSERDA has made a compelling showing that substantial cost savings will likely result if the Index REC is introduced as an option for the 65 eligible renewable energy

¹³ Hedges are a form of insurance policy that use financial instruments or market strategies to offset the risk of adverse price movements, and to reduce the potential for unanticipated losses.

projects now under Fixed-Price REC contracts. NYSERDA estimates an \$8 per REC savings created by the Index REC structure that would be evenly split between developers and ratepayers. These savings primarily result from the ability with an Index REC to hedge wholesale market revenues. As discussed below, under the offer-based approach, NYSERDA proposes to reduce the levelized cost of the Fixed-Price REC cost by 20%, which is a proxy for half the estimated cost savings that an Index REC is expected to provide. Other ratepayer and developer benefits may result as well, including a reduction in the volatility of energy bills and avoidance of doublecounting if a carbon price is introduced in wholesale energy markets.¹⁴

In addition to these benefits, the proposal has the potential to accelerate the State's progress towards the renewable energy goals included in the CLCPA.¹⁵ These ambitious goals will require a considerable increase in Tier 1 procurements and highlights the importance of minimizing project attrition.

The Commission rejects suggestions made by certain comments that the Index REC approach has not been shown to be a better alternative to Fixed-Price contracts. The City, JU, and MI, for example, are concerned that Index RECs have the potential to negatively impact ratepayers by imposing additional costs on customers as the risk of energy price fluctuations is transferred to customers. However, as we stated in the Index REC Order, if wholesale energy and capacity prices increase above expected levels, indexation will cause the REC component price of customers' bills to be reduced. If energy and capacity

¹⁴ Index REC Order, p.15-16.

¹⁵ The Commission recently modified the CES to incorporate the CLCPA requirements. See Case 15-E-0302, et al., Order Adopting Modifications to the Clean Energy Standard (issued October 15, 2020) (CES Modification Order).

prices are materially lower than NYSERDA's estimates, the REC component of bills will increase in price.

The Index REC method has been adopted by the Commission as an option for both offshore wind and future Tier 1 REC procurements, and we likewise extend that policy here for developers that have existing Tier 1 Fixed-Price contracts but have not yet commenced operations. So far, the Index REC option has been successfully used by NYSERDA for an offshore wind solicitation that produced competitive prices, and the concept is generally well established and sufficiently understood.¹⁶ Extending that option to eligible projects is expected to produce similar benefits, and should help provide more certainty and lead to reduced attrition with these projects. Most commenters likewise support this proposal. The Clean Energy Parties, for example, state that NYSERDA's proposal will allow for more projects to obtain favorable financing, thus reducing the costs of installing renewable energy facilities. NYSERDA is therefore authorized to provide an Index REC option to these projects as described in the Petition, and shall conform its usage and calculation with the Index REC Order.

NYSERDA provides three options by which the conversion option would be implemented. Most commenters argue that the offer-based approach should be adopted, and the Commission agrees. The Commission rejects the bid-based and hybrid

¹⁶ The Fixed-Price REC Tier 1 RES solicitations have resulted in prices in the range of \$18.52 - \$21.71 per MWh, while the only solicitation so far to employ an Index REC in New York resulted in an estimated OREC price of \$25.14 per MWh. Considering the larger capital needs of offshore wind and the resulting higher risk profiles of those types of projects relative to onshore developments, the general proximity of REC prices amongst the two types of procurements provides valuable insight into how risk and other factors have been integrated into bidding behavior.

approaches based on the administrative burdens that would result from their implementation, as well as the uncertainty in the level of discount from the Fixed-Price REC agreements. While the bid-based proposal could potentially produce larger discounts, as the City argues, the offer-based approach is simpler to administer and guarantees ratepayers a savings percentage for providing the hedging component of the contract. Introducing another duplicative procurement introduces more uncertainty for developers that can negate some of the benefits that the conversion option is intended to achieve. The Commission also agrees with EDF that since the proposed Index REC formula relies on publicly available forecasts, the offer-based approach would limit the back and forth between parties and may have the potential to lessen NYSERDA's administrative burden.

The Commission rejects the recommendation made by some commenters to increase the 20% discount rate proposed in the Petition. The City, for example, recommends that the Commission err on the side of ratepayer interests and apply a strike price discount that is closer to the full expected savings (i.e., \$8 per REC). However, ACE and Invenergy argue that a 20% discount is very significant and recommends a lesser discount rate of 10-15%. Requiring larger discounts could lead a developer to forego participation and instead abandon the project altogether. Determining the precise inflection point is difficult and the Commission has decided to exercise caution given the difficult financial environment these projects are encountering in light of the COVID-19 pandemic and other challenges. EDF recommends that any discount factor in the Index REC strike price offer be based on the average Fixed REC price for all similar counterparties (e.g., employing the same technology and in the same zone or accounting for zonal LBMP differences) rather than

individual counterparty's Fixed REC price. However, adoption of this recommendation would introduce a level of administrative complexity that is unjustified. The 20% proxy sufficiently balances the need for appropriate sharing between developers and ratepayers, and administrative simplicity.

As detailed in the Petition, NYSERDA would calculate the Index REC price using the following components: (1) the Fixed-Price REC price term in the project's existing agreement; (2) NYSERDA's estimate of the future energy and capacity prices in the project's NYISO load zone that would determine the reference energy price and reference capacity price used in the Index REC formula; and (3) the selected Summer and Winter Unforced Capacity (UCAP) Production Factors for the project. Most commenters suggest that this formula would allow many of the projects to be completed. ACE supports NYSERDA's selection of forecasts because they are published by expert independent agencies, are the most recent forecasts available, and would be consistent with the projections used in the "White Paper on Clean Energy Standard Procurements to Implement New York's Climate Leadership and Community Protection Act." The Commission agrees and therefore adopts NYSERDA's formula.

Regarding times when the LBMP is negative, the resulting REC price paid to the developer could be correspondingly higher than normal. NYSERDA proposes to acquire the RECs without compensation to avoid unjustified compensation to developers. Most commenters like ACE and EDF argue that this policy would create significant project risk. Some commenters recommend that NYSERDA consider limiting its exposure to the Index REC strike price when the applicable LBMP is negative, thereby establishing a floor on the applicable LBMP of zero. EDF states a zero-price floor would strike a reasonable balance of customer risks associated with open-ended exposure to

negative LBMPs and developer risks associated with unanticipated future changes.

As we stated in the Index REC Order, the Commission generally avoids encouraging generators to produce energy when LBMPs are negative because doing so could result in curtailing other renewables or nuclear facilities.¹⁷ However, the instances when hourly day-ahead zonal prices are negative are rare, and it is highly unlikely that the monthly zonal LBMP would be negative. Nevertheless, were the monthly zonal LBMP to be negative, the relatively high Index REC price would be considered an inappropriate incentive to maximize output during these times when generation is unnecessary. To address negative LBMPs, the Commission directs NYSERDA to adopt an Index REC price ceiling at the strike price, as is required in the Index REC Order. Without a cap, there could be a potential for perverse bidding incentives by developers and an unnecessary increase in ratepayer costs associated with the conversion to the Index REC contract.

Finally, with respect to implementation matters, the Petition indicates that "NYSERDA would initiate the [offer-based approach] by issuing a notice inviting all eligible REC Counterparties to express interest in receiving an Index REC strike price offer. The notice would identify default UCAP Production Factors by technology type, but would invite the REC Counterparties to supply project-specific UCAP Production Factors if they wish, as bidders may do under RES solicitations."¹⁸ The Commission anticipates that NYSERDA will require sufficient time to prepare the notice and the model for converting the pricing term from Fixed to Indexed before issuing such notices to eligible developers, and expects that 60 days

¹⁷ Index REC Order, p.24.

¹⁸ Petition, pp. 3-4.

will be a sufficient period. The notice should afford eligible developers a minimum of 15 business days to express interest in receiving an Index REC strike price offer, which should be followed by an actual offer from NYSERDA within 10 days. The Petition recommends that developers be provided with 30 days to accept or reject the offered Index REC strike price. A number of commenters recommend increasing the timeframe or clarifying that it refers to calendar days. The Commission agrees with EDF that 45 days should be provided to allow sufficient time for developers to evaluate the offers, seek any necessary corporate approvals, and accept or reject NYSERDA's offer to modify their contracts under the Index REC approach adopted here.¹⁹

CONCLUSION

The achievement of New York's ambitious renewable energy goals will require robust participation by developers. The Commission's actions in this Order seek to reduce developers' financial risks and support the development of additional renewable generation resources by allowing eligible projects to convert their existing Fixed-Price REC price term to an Index REC. The offer-based approach approved herein, with a 20% discount, ensures ratepayers will realize savings and provides a proper balance with developer interests.

The Commission orders:

1. The New York State Energy Research and Development Authority shall issue a notice, within 60 days of the issuance of this Order, inviting all eligible developers to express interest in receiving an Index Renewable Energy Credit

¹⁹ The Commission clarifies that the dates noted in this Order refer to calendar days unless noted otherwise.

strike price offer, and shall further adhere to the implementation process discussed in the body of this Order.

2. The New York State Energy Research and Development shall provide a one-time option for eligible developers that have existing Fixed-Price Renewable Energy Credit contracts, but have not yet commenced commercial operation, to accept or reject, within 45 days, an offered Index Renewable Energy Credit strike price offer, as discussed in the body of this Order.

3. The New York State Energy Research and Development shall modify its existing Fixed-Price Renewable Energy Credit contracts for developers that accept the Index Renewable Energy Credit strike price offer, and incorporate the terms discussed in the body of this Order.

4. In the Secretary's sole discretion, the deadlines set forth in this Order may be extended. Any request for an extension must be in writing, must include a justification for the extension, and must be filed at least three days prior to the affected deadline.

5. This proceeding is continued.

By the Commission,

(SIGNED)

MICHELLE L. PHILLIPS
Secretary

SUMMARY OF COMMENTS

Alliance for Clean Energy New York (ACE)

ACE notes that existing projects with awarded contracts are facing economic conditions different from when contract bids were originally submitted. The option to convert to Index REC contracts offers several benefits including a reduction in finance costs, allowing projects to advance in the development process, and the ability to secure financing and reach construction and commercial operation sooner.

ACE supports NYSERDA's selection of forecasts because they are published by expert independent agencies, are the most recent forecasts available, and would be consistent with the projections used in the Clean Energy Standard (CES) White Paper. ACE also notes that the strike prices resulting from the formula may enable most of the contracts to secure financing. ACE notes that a discount factor can be applied to the Fixed Renewable Energy Credit (REC) price and still enable many of the contracts to secure financing. However, ACE believes that a 20% discount is very significant and recommends a lesser discount rate of 10-15%.

The Petition provides 30 days for REC counterparties to accept or reject the offered Index REC strike price, and ACE recommends that the Commission clarify the time period includes 30 calendar days. ACE is opposed to acquiring RECs without compensation for any hours in which the applicable real-time location-based marginal price (LBMP) is negative. ACE finds this policy would introduce instability and eliminate the benefit from the conversion to the Index REC contract.

Boralex Inc. (Boralex)

Boralex supports the process of allowing projects that have not yet reached commercial operation to request that NYSERDA amend their agreements and convert from Fixed REC price terms to Index REC price terms. Authorizing this one-time process would provide benefits to ratepayers, New York host communities, REC counterparties, and would advance New York's renewable energy growth. Of the two main alternative conversion approaches in the Petition (offer-based, hybrid/bid-based), Boralex finds the offer-based approach would maintain the integrity of the original solicitation. This approach would also have the benefit of applying the same calculation to all REC counterparties and would guarantee that ratepayers for each project would benefit from the same discount to the Fixed REC price.

City of New York (City)

The City recommends that the Commission adopt the bid-based approach to Index REC conversions because of the potential to achieve increased renewable development at a lower cost than Fixed REC contracts. However, the City is concerned that Index RECs have the potential to negatively impact ratepayers because although features of Indexed RECs make access to financing easier for developers, it could impose additional costs on customers as the risk of energy price fluctuations is transferred to customers. The City is also concerned that NYSERDA's method for converting from Fixed to Indexed RECs may not maximize the potential customer savings from the conversions. The City finds that the primary shortcoming of the offer-based approach is that it does not include a mechanism

through which developers reveal their willingness to pay for the hedge represented by an Indexed REC contract.

The City suggests that a bid-based approach would induce developers to demonstrate the value of the hedge through their bids. As such, the City recommends that the Commission direct NYSERDA to use the competitive bid-based approach proposed in the Petition. However, if the Commission adopts the offer-based approach, the City recommends a steeper discount be applied to the Index REC strike price than the 20%/\$4 per REC discount proposed. The City recommends that the Commission err on the side of ratepayer interests and apply a strike price discount that is closer to the full \$8 per REC savings ratepayers would normally expect in response to an Index REC procurement.

NRDC, Sierra Club, New Yorkers for Clean Power, and New York League of Conservation Voters (Clean Energy Parties)

The Clean Energy Parties state that NYSERDA's proposal would allow for more projects to obtain favorable financing and that such an approach would reduce the costs of installing new clean energy. By providing a hedge against market volatility, an Index REC would lower financing costs for renewable generators and therefore result in lower and less unpredictable prices for customers. As the Commission has supported the use of Index REC contracts in other proceedings, the same rationale should apply to the existing suite of recently awarded Fixed REC contracts.

EDF Renewables (EDF)

EDF argues that the Petition supports potential ratepayer savings, reduction in rate volatility, and avoidance

of double payments for renewable energy attributes if carbon price were implemented. EDF believes the proposal is in the best interests of customers and is supported by the Commission. EDF notes that the selected approach should prioritize limiting project attrition to achieve the CLCPA goals and recognize that existing contracts were competitively awarded. If attrition can be limited through Index REC conversion it would reduce the need for incremental procurement volumes through the mid-2020s. EDF believes that this would present an economic benefit to customers.

EDF believes that the offer-based approach will be most effective at promoting the achievement of the renewable energy goals of the CLCPA by limiting project attrition and providing a reasonable opportunity to convert to an Index REC. EDF notes that this approach avoids the potential of double jeopardy through participating in a second, duplicative competition. In addition, because the proposed formula relies on publicly available forecasts, the offer-based approach would limit the back and forth between parties and may have the potential to lessen NYSERDA's administrative burden.

EDF states that the proposed 20% savings target to Fixed REC prices offered to all counterparties may be unreasonable, and recommends that any discount factor in the Index REC strike price offer be based on the average Fixed REC price for all similar counterparties (e.g., employing the same technology and in the same zone or accounting for zonal LBMP differences) rather than individual counterparty's Fixed REC price. Under this approach, counterparties would be offered an Index REC strike price based on a discount factor that considers how their Fixed REC price term compares to the average for their peers. NYSERDA could establish these respective discount

factors to achieve the 20% reduction that it identified in its Petition. EDF recommends that the 30-day window for counterparties to accept or decline an offer be extended to 45-days to allow sufficient time to evaluate the offer and seek necessary corporate approvals.

EDF recommends that the Commission reject the CES White Paper proposal allowing NYSERDA to acquire without compensation any REC generated in hours where the applicable real-time LBMP is negative. EDF is concerned that this would create significant project risk and recommends that NYSERDA consider limiting its exposure to the Index REC strike price when the applicable LBMP is negative, thereby establishing a floor on the applicable LBMP of zero. EDF states that this would represent a reasonable balance of customer risks associated with open ended exposure to negative LBMPs and developer risks associated with unanticipated future changes.

Invenergy Renewables, LLC (Invenergy)

Invenergy supports NYSERDA's proposal to allow for a one-time, voluntary, offer-based formula to convert current Fixed REC prices to Index REC prices for projects that have not yet reached commercial operation. Invenergy states that conversion of the contracts will enable timely financing and construction of a majority of these projects, and finds that the offer-based formula is the most equitable, timely, and efficient conversion methodology that would benefit ratepayers.

Invenergy is also in favor of the formula-based offer proposed by NYSERDA as it allows for greater speed and certainty than the alternative bid or hybrid methodology. To align with the 20-year contract term, Invenergy recommends holding the 2028 pricing constant in real terms and using a two percent annual

inflation rate to calculate nominal forecasts. As the NYISO's 2019 Congestion Assessment and Resource Integration Study I forecast was used in the CES White Paper, its use in the contract conversion would provide consistency across NYSERDA projections. The proposed conversion formula applies a 20% discount factor to the previously contracted Fixed REC price but Invenergy recommends that the Commission establish a reduced 10-15% rate because the Fixed REC prices were the result of highly competitive procurements and that regulatory delays have caused economic harm.

Regarding the alternative bid approach, Invenergy notes that it would diminish the integrity of the original competitive bidding process because NYSERDA proposes to introduce scarcity in this approach by limiting awards to 80% of the qualifying bid or by comparing each bid to a confidential reference price. In doing so, Invenergy states this is likely to reduce the number of projects constructed and reduce the integrity of the second competitive process. Invenergy also notes that an alternative bid process would likely take longer to implement than the offer-based approach, and that the hybrid approach would take too long to implement and risks undermining the validity of the original competition.

Invenergy recommends that the Commission clarify that the 30-day window that counterparties are provided to accept or reject the Index REC strike price be clarified to 30 calendar days. It also recommends that the Commission require NYSERDA to notify the REC counterparties of the offer opportunity as soon as possible, or within 30 calendar days after the Commission acts on the Petition. Invenergy strongly opposes the adoption of a policy that RECs be acquired without compensation when real-time LBMP is negative for any contracts converted from

Fixed to Index REC pricing as this would introduce volatility, cause undue harm and risk, and eliminate the benefit from converting the contract price terms.

Joint Utilities (JU)

The JU states that the NYSERDA proposal lacks assurance that the switch to Index REC contracts would result in lower financing costs, and believes that if implemented it would unnecessarily shift risks and costs from developers to customers. Also uncertain is whether the proposal to estimate a strike price without a competitive bid process would produce revised contracts with terms comparable to the process that provided the original option of Index RECs for future procurements.

The JU finds that the proposal does not convincingly demonstrate that changing the pricing for these projects will produce financial benefits that were the basis for the Commission's approval of Index RECs for future procurements. The JU does not find that NYSERDA has provided any mechanism to ensure that cost advantages from lower financing costs are shared with customers in a definitive way. The JU finds that NYSERDA's Petition provides certainty to renewable energy developers but offers no direct benefits to customers forced to bear the risk burden. The JU urges that for whatever proposal is approved (offer-based, bid-based, or hybrid), the Commission should establish a methodology to ensure that financial benefits from the conversion flow primarily to customers.

Lastly, the JU urges the Commission to consider utility ownership of such resources because enabling utilities to work with developers to develop, design, build, commission, and own large-scale renewable projects would result in far lower

costs to customers both up-front and over time than under the risk transfer envisioned under NYSERDA's proposal.

Multiple Intervenors (MI)

MI finds that NYSERDA's proposal could potentially force customers to inequitably bear significant risks and additional costs. MI notes that the use of an Index REC mechanism inappropriately shifts market price risk from private developers to customers. The construct of a Fixed REC price places the risks of wholesale market prices on the developer as opposed to the customer. Developers who have submitted Fixed REC bids that were subsequently accepted by NYSERDA understood the risks of market fluctuations and that these same developers should not be allowed to obtain more favorable prices at the possible expense of customers. MI notes that NYSERDA's claim that a 20% reduction in REC costs that would equate to an average savings of \$4 per REC are contingent upon the accuracy of NYSERDA's energy and capacity price forecasts. If those forecasts were inaccurate, it could lead to increased costs for customers.

Northland Power (Northland)

Northland notes that NYSERDA's proposal would drive ratepayer savings while advancing policy goals of the CLCPA. Northland supports the offer-based approach as outlined in the Petition, noting the approach is simple, efficient, and transparent.