

STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

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

ORDER ADOPTING MODIFICATIONS TO THE CLEAN ENERGY STANDARD

Issued and Effective: October 15, 2020

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STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

At a session of the Public Service
Commission held in the City of
Albany on October 15, 2020

COMMISSIONERS PRESENT:

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

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(Issued and Effective October 15, 2020)

BY THE COMMISSION:

INTRODUCTION

New York State has taken a number of significant steps to combat climate change by reducing greenhouse gas emissions associated with electric generation. The Public Service Commission (Commission) has played a critical role in these efforts through various initiatives to promote the deployment of clean energy resources, energy efficiency measures, and advanced energy storage technologies. Building on these initiatives, the State enacted the Climate Leadership and Community Protection Act (CLCPA), which directs the Commission to establish a program to ensure (1) sufficient amounts of renewable energy resources to serve at least 70% of load in 2030, and (2) that there are

zero emissions in 2040 associated with electrical demand.¹ The CLCPA also directs the Commission to establish programs to achieve procurement goals for specific technologies, including the deployment of 6 gigawatts (GW) of photovoltaic solar generation by 2025, 3 GW of energy storage resources by 2030, and at least 9 GW of offshore wind by 2035.

In this Order, the Commission adopts several modifications to its existing Clean Energy Standard (CES) in order to align with the CLCPA mandates. The Commission also adopts a competitive procurement program under Tier 2 of the CES to secure the continued availability of existing renewable resources. These actions together will put New York on a path toward achieving the State's ambitious climate and clean energy objectives.

BACKGROUND

On August 1, 2016, the Commission adopted the CES to achieve a statewide deployment goal of 50% renewable generation resources by 2030 (the 50 by 30 goal).² The Commission divided the CES into a Renewable Energy Standard (RES) and a Zero-Emissions Credit (ZEC) requirement.³ The RES includes a Tier 1

¹ See, Chapter 106 of the Laws of 2019 (codified, in part, in Public Service Law (PSL) §66-p). The CLCPA became effective on January 1, 2020.

² Case 15-E-0302, et al., Order Adopting A Clean Energy Standard (issued August 1, 2016)(CES Framework Order). The Commission adopted the CES in furtherance of the 2015 State Energy Plan, which set a target that 50 percent of electricity used in New York State be generated from renewable energy sources by 2030.

³ The ZEC program provides support for certain nuclear power facilities in the State. In contrast to the Tier 1 RES program, NYSERDA and DPS Staff annually calculate a uniform per MWh rate that is applied to each LSE's actual wholesale load to calculate each LSE's ZEC monthly obligation.

component that obligates each load-serving entity (LSE) to serve its retail customers by procuring new renewable resources, evidenced by the procurement of qualifying Tier 1 Renewable Energy Certificates (RECs) from the New York State Energy Research and Development Authority (NYSERDA) or other sources, or by making Alternative Compliance Payments (ACPs).⁴ The RES also includes a Tier 2 maintenance program to provide financial support for existing eligible renewable facilities that are at risk of ceasing operations. In 2018, the Commission added an Offshore Wind Standard to the CES by requiring LSEs to support the procurement of 2.4 GW of offshore wind resources by 2030.⁵

The Tier 1 RES program operates through a demand obligation on each LSE, which must either procure RECs produced by eligible Tier 1 facilities to serve a specified percentage of its load or make up any shortfall by providing ACPs to NYSEDA. The LSE obligation, which the Commission set for the 2017 to 2022 timeframe, is determined based on projections of the sum of: (1) the expected available volume of Tier 1-eligible RECs under contract to NYSEDA; and (2) the expected Tier 1-eligible RECs conveyed to investor-owned utilities (IOUs) from Value of Distributed Energy Resource (VDER) projects. The CES Framework Order set LSE obligation percentages through 2021 and directed DPS Staff and NYSEDA to base the LSE obligation on a three-year rolling trajectory for subsequent years. DPS Staff and NYSEDA

⁴ RECs represent the environmental attributes, including but not limited to estimated avoided carbon dioxide emissions, associated with electricity generated by facilities that meet the Tier 1 eligibility criteria established in the CES Framework Order.

⁵ Case 18-E-0071, In the Matter of Offshore Wind Energy, Order Establishing Offshore Wind Standard and Framework for Phase 1 Procurement (issued July 12, 2018) (Offshore Wind Order).

subsequently established the 2022 obligation through issuance of the 2019 Divergence Test.⁶

The Maintenance or Tier 2 RES program is intended to ensure the continued availability of legacy baseline resources to meet the State's renewable energy goals. The program presumes that, absent some form of State support, certain baseline renewable resources may become uneconomic and shut down or seek revenue from another state, with the subsequent loss of these resources making it more difficult for the State to meet its clean energy targets. The Commission's March 16, 2018 Baseline Order expanded the Maintenance Tier 2 program, streamlined the review process, expanded eligibility, and allowed additional costs to be included in the determination of need.⁷ The Baseline Order authorized a standard three-year contract term for maintenance tier contracts and permitting facilities to apply for renewal of an existing Maintenance Tier contract. Under the existing construct, Tier 2 contracts are awarded on a case-by-case basis, and eligible facilities are limited to run-of-river hydroelectric facilities sized 10 megawatt (MW) or less, wind facilities, and biomass direct combustion facilities that were in commercial operation before January 1, 2015. Each participant must demonstrate a financial need showing that it would cease operations without such support.

Of course, the voluntary market remains one of the potential outlets for resources not contracted with NYSERDA. Voluntary purchases of new, New York-based renewable energy supply counts towards CES goals and can be driven by

⁶ Case 15-E-0302, 2019 Divergence Test and Target Setting Filing (filed September 30, 2019).

⁷ Case 15-E-0302, Order Adopting Measures for the Retention of Existing Renewable Baseline Resources (issued March 16, 2018).

participants of community choice aggregation (CCA) projects or from purchases by customers of energy service companies (ESCOs) and utilities offering products backed by RECs from renewables whose energy is consumed within New York. Demand can also come from voluntary procurements by larger commercial, industrial, institutional, or government end-use customers.

In 2018, the Commission augmented the Tier 1 and Tier 2 programs through addition of an LSE obligation to purchase Offshore Wind Renewable Energy Certificates (ORECs) in proportion to the load served by each LSE. The Offshore Wind Order established the Offshore Wind Standard with a goal of adding 2,400 MW of offshore wind capacity in New York State by 2030. The Commission also authorized NYSERDA to hold initial procurement solicitations in 2018 and 2019, for an aggregate of approximately 800 MW or more of offshore wind. In response to the initial procurement, NYSERDA successfully contracted for 1,696 MW of offshore wind in October 2019.⁸ On April 23, 2020, to maintain New York's trajectory in meeting its clean energy goals, the Commission authorized NYSERDA to issue an additional offshore wind solicitation for 1,000 MW or more.⁹ Many of the details related to the OREC LSE obligation have yet to be determined due to the offshore wind industry's nascent development and a project's relatively long development timeframes. The LSE's compliance obligation will not commence until an offshore wind development starts producing ORECs, which is not expected until 2024 at the earliest.

⁸ Case 18-E-0071, NYSERDA's Launching New York's Offshore Wind Industry: Phase 1 Report (filed October 23, 2019).

⁹ Case 18-E-0071, In the Matter of Offshore Wind Energy, Order Authorizing Offshore Wind Solicitation in 2020 (issued April 23, 2020).

PSL §66-p (added by the CLCPA) directs the Commission to establish a program whereby: (1) jurisdictional LSEs have secured adequate amounts of renewable energy resources to serve at least 70% of load in 2030 (70 by 30 Target); and (2) there are zero emissions in 2040 associated with the "statewide electrical demand system." The CLCPA also mandates technology-specific procurement goals, including the deployment of 6 GW of distributed photovoltaic (PV) solar generation by 2025, 9 GW of offshore wind by 2035, and 3 GW of energy storage resources by 2030.¹⁰ The CLCPA requires the Commission, by July 1, 2024 and every two years thereafter, to issue for notice and comment a "comprehensive review" that considers "(a) progress in meeting the overall targets for deployment of renewable energy systems and zero emission sources, including factors that will or are likely to frustrate progress toward the targets; (b) distribution of systems by size and load zone; and (c) annual funding commitments and expenditures."¹¹

The CLCPA describes the program the Commission must establish as applying to "electric generation secured by jurisdictional load serving entities."¹² The CLCPA defines the

¹⁰ Before the CLCPA was enacted, the Commission had established a similar energy storage deployment goal of 3 GW. See, 18-E-0130, In the Matter of Energy Storage Deployment Program, Order Establishing Energy Storage Goal and Deployment Policy (issued December 18, 2018). The 3 GW energy storage target is in addition to 1.4 GW of traditional pumped hydro storage that is already deployed.

¹¹ PSL §66-p(5). PSL §66-p(4) provides the Commission with authority to "temporarily suspend or modify" the obligations created by the Program if, after conducting a hearing, it finds that the Program "impedes the provision of safe and adequate electric service," "is likely to impair existing obligations and agreements," and/or is related to "a significant increase in arrears or service disconnections."

¹² PSL §66-p(2)(a).

term "jurisdictional load serving entity" as "any entity subject to the jurisdiction of the [C]ommission that secures energy to serve the electrical energy requirements of end-use customers in New York [S]tate."¹³ As defined, these entities include IOUs, ESCOs, CCAs not served by ESCOs, jurisdictional municipal utilities, and any retail customers self-supplying through the New York Independent System Operator (NYISO). While not jurisdictional LSEs, the New York Power Authority (NYPA) and the Long Island Power Authority (LIPA) have also committed to adopting renewable energy targets that achieve the CES's renewable energy targets.¹⁴

The CLCPA's definition of renewable energy systems differs from the eligible resources under the existing RES. The CLCPA defines "renewable energy systems" as:

systems that generate electricity or thermal energy through use of the following technologies: solar thermal, photovoltaics, on land and offshore wind, hydroelectric, geothermal electric, geothermal ground source heat, tidal energy, wave energy, ocean thermal, and fuel cells which do not utilize a fossil fuel resource in the process of generating electricity.¹⁵

The CLCPA's definition does not include biomass or biogas, which are currently eligible under the RES. In addition, while the RES includes low-impact run-of-river projects and hydroelectric resources to the extent of the incremental production associated with upgrades to existing facilities without new storage impoundments, the CLCPA contains no such eligibility limitations for such resources. Finally, fuel cells are RES-eligible technologies without regard to fuel source, whereas the CLCPA

¹³ PSL §66-p(1)(a).

¹⁴ NYSEDA, Clean Energy Standard Annual Progress Report: 2018 Compliance Year (filed December 31, 2019), pp. 6-8.

¹⁵ PSL §66-p(1)(b).

applies to fuel cells only if they "do not utilize a fossil fuel resource in the process of generating electricity."¹⁶

Of particular importance, the CLCPA directs the Commission to design the programs for achieving the renewable energy targets "in a manner to provide substantial benefits for disadvantaged communities. . . including low to moderate income consumers, at a reasonable cost while ensuring safe and reliable electric service."¹⁷ The CLCPA defines "disadvantaged communities" as "communities that bear burdens of negative public health effects, environmental pollution, impacts of climate change, and possess certain socioeconomic criteria, or comprise high-concentrations of low- and moderate- income households, as identified pursuant to section 75-0111 of the Environmental Conservation Law (ECL). ECL §75-0111, in turn, creates a process through which the Climate Justice Working Group will establish criteria for identifying disadvantaged communities. The CLCPA also requires the Commission to take steps to ensure reductions in emissions from peaker plants, many of which are located in low-income communities. The CLCPA requires the Commission: "[t]o the extent practicable, specify that a minimum percentage of energy storage projects should deliver clean energy benefits into NYISO zones that serve disadvantaged communities . . . and that energy storage projects

¹⁶ The Commission has addressed the eligibility of fuel cells using fossil fuels to receive the Environmental Value under the VDER Value Stack. The Commission precluded these resources from receiving the Environmental Value due to their disqualification under the CLCPA. See, Case 15-E-0751, The Value of Distributed Energy Resources, Order Regarding Value Stack Compensation for High-Capacity-Factor Resources (issued December 12, 2019).

¹⁷ PSL §66-p(7).

be deployed to reduce the usage of combustion-powered peaking facilities located in or near disadvantaged communities.”¹⁸

On June 18, 2020, to implement PSL §66-p, DPS Staff and NYSERDA jointly prepared a “White Paper on Clean Energy Standard Procurements to Implement New York’s Climate Leadership and Community Protection Act.” The White Paper proposes to use the existing regulatory and procurement structure established under RES to meet the 70 by 30 Target and adopt policy changes and other modifications to the CES in order to align with the CLCPA. Specifically, the White Paper proposes, among other issues, to: (1) align RES eligibility with the definition of renewable energy systems in the CLCPA; (2) adopt average annual procurement targets for Tier 1 and offshore wind intended to meet the CLCPA target dates; (3) modify the Tier 1 and offshore wind solicitation process; (4) create a new Tier 4 that would provide support for renewable energy projects that deliver energy into New York City (i.e., load Zone J); (5) adopt new repowering requirements; (6) adopt a mechanism for addressing shortfalls in ZEC obligations; (7) establish a new funding mechanism; and (8) establish new reporting requirements. The White Paper also seeks stakeholder input on various issues related to CES modifications intended to align with the CLCPA.

This Order also addresses a petition, filed by NYSERDA on January 24, 2020, to establish a Competitive Tier 2 Program to support wind and hydroelectric baseline facilities (Tier 2 Petition). The Tier 2 Petition proposes a five-year Competitive Tier 2 Program that would include three annual solicitations, with each solicitation procuring one-third of the overall program capacity. Facilities selected in the solicitation would receive a standard three-year contract with NYSERDA. Eligible

¹⁸ PSL §66-p(7)(a).

facilities would include in-state wind resources and privately-owned run-of-river hydroelectric generators, regardless of facility size, that commenced commercial operation prior to January 1, 2015. NYSERDA proposes funding the Tier 2 Program up to \$200 million, which is expected to allow for the majority of eligible generation to receive support, while also maintaining a competitive market. The program would begin in 2020 with the issuance of the first Request for Proposal (RFP), and continue through 2026 for transactions in 2025, the last compliance year.

NOTICES OF PROPOSED RULEMAKING

A Notice of Proposed Rulemaking with respect to the Tier 2 Petition was published in the State Register on February 12, 2020 [SAPA No. 15E0302SP41] pursuant to the State Administrative Procedure Act (SAPA) §202(1). On April 2, 2020, the Secretary extended the comment period from April 13, 2020, to May 4, 2020. The Commission received 19 comments and one reply comment, each of which is summarized in Appendix F.¹⁹

A Notice of Proposed Rulemaking with respect to the White Paper was published in the State Register on July 1, 2020 [SAPA No. 15-E-0302SP44]. A Notice Scheduling Technical Conference and Soliciting Comments, issued on June 30, 2020, scheduled a technical conference related to the White Paper for July 14, 2020. The Notice required preliminary feedback by July 24, 2020, on the substance of the White Paper and the Technical Conference, and the submission of formal comments by August 31, 2020. The deadline for submission of comments pursuant to the July 1, 2020 SAPA Notice was August 31, 2020. Over 60 comments

¹⁹ In addition to a summary of the comments received, Appendix F also provides the full names of the commenting entities, as well as the acronyms used in this Order.

from parties and over 1,500 public comments were filed in the docket, which are summarized in Appendix F.

LEGAL AUTHORITY

The Commission's authority derives from the PSL, through which numerous legislative powers are delegated to the Commission. 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."

In addition, 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." 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,²⁰ environmental stewardship, and the conservation of resources.²¹

The CLCPA amended the PSL by adding PSL §66-p(2), which directs the Commission to "establish a program to require that: (a) 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 two thousand thirty shall be generated by renewable energy systems; and (b) that by the year two thousand forty (collectively, the 'targets') the statewide electrical demand system will be zero emissions." In establishing such program, PSL §66-p(2) requires the Commission to "consider and where applicable formulate the program to address impacts of the program on safe and adequate electric service in the state under reasonably foreseeable conditions. The commission may, in designing the program, modify the obligations of jurisdictional load serving entities and/or the targets upon consideration of the factors described in this subdivision."

In addition to the PSL, the New York State Energy Law §6-104(5)(b) requires that "[a]ny energy-related action or decision of a state agency, board, commission or authority shall be reasonably consistent with the forecasts and the policies and long-range energy planning objectives and strategies contained in the plan, including its most recent update."

²⁰ See, International R. Co. v Public Service Com., 264 AD 506, 510 (1942).

²¹ PSL §5(2); see also, Consolidated Edison Co. v Public Service Commission, 47 NY2d 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).

STATE ENVIRONMENTAL QUALITY REVIEW ACT

On June 12, 2020, in accordance with the State Environmental Quality Review Act (SEQRA), the Commission issued a Draft Supplemental Generic Environmental Impact Statement (SGEIS) that explored the potential environmental impacts associated with the increase in renewable resources needed for implementation of the following CLCPA requirements: (1) 70% of electricity from renewable energy by 2030; (2) 9 GW of offshore wind electricity by 2035; and (3) 6 GW of distributed photovoltaic solar generation. Over 140 entities submitted comments. After evaluating the comments, on September 17, 2020, the Commission finalized and published a Final SGEIS.

In conjunction with the decisions made in this Order, the Commission has considered the information in the Final SGEIS and hereby adopts the SEQRA Findings Statement prepared by the Commission as lead agency for these actions in accordance with ECL Article 8 (i.e., SEQRA) and 6 NYCRR Part 617. The SEQRA Findings Statement is attached to this Order as Appendix E. The SEQRA Findings Statement is based on the facts and conclusions set forth in the Final SGEIS. It concludes that several direct benefits would result from this action in the form of reductions in greenhouse gas emissions, additional economic development, workforce employment, the avoidance of adverse health outcomes, and improved transmission and distribution networks. Additional secondary benefits that may result include further development of new agricultural markets, coastal tourism, indirect jobs associated with construction and operation, purchases of local products and services, and new or increased tax payments by employees and facilities. In conjunction with other State and Federal policies and initiatives, implementation of the CLCPA's renewable energy targets as proposed in the White Paper is designed to reduce the adverse environmental, social and

economic impacts of fossil fuel energy resources by increasing the use of clean energy resources and technologies.

DISCUSSION

The CLCPA establishes an ambitious set of objectives that are necessary to reduce greenhouse gas emissions, combat climate change, and improve the State's public health and welfare. As discussed further below, the Commission seeks to build upon the CES in a manner that will benefit New York energy consumers and the overall economy by encouraging new clean energy and related investments in the State, maintaining existing jobs, and attracting capital from outside the State.

The Commission recognizes the significant benefits anticipated with respect to the actions taken herein. For instance, the Tier 1 procurements between 2021 and 2026 are estimated to have a levelized impact on electricity bills of less than 0.5% (or \$0.35 per month for the typical residential customer), but yield a net benefit of around \$7.7 billion over the lifetime of the projects, taking into account the value of the avoided carbon emissions.²² Similarly, the incremental offshore wind procurements from 2021 required to reach the 2035 9 GW goal are estimated to have a levelized impact on electricity bills of less than 1.1% (or \$0.81 per month for the typical residential customer), while these procurements are estimated to yield a net benefit of almost \$9.6 billion over the lifetime of the projects.²³ The reductions in other types of air pollutants would increase these benefits.

²² White Paper, p. 23.

²³ White Paper, p. 24.

A. Definition of "Renewable Energy Systems"

The White Paper proposes to align the eligible technologies listed in Appendix A of the CES Framework Order with the definition of renewable energy systems contained in the CLCPA. The CLCPA defines renewable energy systems as "systems that generate electricity or thermal energy through use of the following technologies: solar thermal, photovoltaics, on land and offshore wind, hydroelectric, geothermal electric, geothermal ground source heat, tidal energy, wave energy, ocean thermal, and fuel cells which do not utilize a fossil fuel resource in the process of generating electricity."²⁴ This definition differs from the current technologies eligible under the RES in three notable ways discussed below.

1. Biomass and Biogas

The CLCPA definition of renewable energy systems does not include biomass or biogas, which are currently eligible under the RES. The White Paper thus proposes that future RES solicitations exclude biomass and biogas, while recommending that NYSERDA make no changes to its existing biomass and biogas contracts. Additionally, the White Paper proposes that RECs produced by biomass and biogas facilities subject to such existing contracts continue to be eligible to satisfy LSEs' Tier 1 compliance obligations through 2029, although the RECs associated with these resources would not count toward the 70 by 30 Target.

Many commenters assert that biogas or biomass should be included as eligible technologies because, among other reasons, these technologies have been eligible renewable energy technologies in the past and will be essential to New York achieving its clean energy goals. The Business Council, for example, recommends the creation of a separate CES tier to

²⁴ PSL §66-p(1)(b).

incorporate these resources. ESFPA also recommends the creation of a new tier within the CES for resources that are not included in the CLCPA's definition but are nevertheless zero-carbon or low-carbon dispatchable resources that it asserts should be supported. The JU argues that the Commission should establish biogas as a clean energy resource and either continue qualifying the energy produced by these resources for Tier 1 RECs, or alternatively establish a separate tier for such resources.

Generate states that the omission of organic waste-based renewable energy generation from the definition of renewable energy systems is out of step with New York State's previous clean energy policy, as well as the existing policies of, among others, the Intergovernmental Panel on Climate Change (IPCC), the International Energy Agency (IEA), the United Nations Food and Agriculture Organization (UN FAO). Cornell explains that bioenergy can efficiently provide baseload and/or dispatchable heat and electricity utilizing continuously available waste streams including manure, food scraps, forest residue, and others, while generating collateral benefits like protecting water quality, improving soil health, and sequestering carbon.

ReEnergy states that bioenergy is included as a renewable resource in virtually all renewable energy programs across the United States and internationally. Bioenergy projects, ReEnergy continues, need to monetize the value of their renewable energy attributes to be financially viable, and such projects would be forced to terminate operations without being compensated through sufficiently valued RECs. ReEnergy argues that bioenergy is a firm low-carbon resource that can address the challenge of seasonal variation in supply and play a key role in climate change mitigation. ReEnergy suggests the creation of a separate tier within the CES framework for

resources that are not included in the CLCPA definition of renewable energy systems but are zero-carbon or low-carbon dispatchable resources that should be supported for purposes of ensuring the State's ability to reach other CLCPA goals.

Taylor Biomass Energy requests that biomass energy systems currently authorized for Tier 1 eligibility be grandfathered in perpetuity. Taylor Biomass Energy also argues that the Commission needs to address questions related to the administration of RECs from biomass generation imported into New York.

While the Commission certainly understands the concerns raised by commenters, its actions regarding the resources covered under the definition of "renewable energy systems" under PSL §66-p(1)(b) must be based on the plain language of the statute. The Commission thus adopts the interpretation of that term as set forth in the White Paper, which by its plain terms excludes from eligibility biomass and biogas resources.

However, recognizing that such technologies have historically been included as eligible technologies under the RES, the Commission adopts the White Paper proposal to direct NYSERDA to continue to honor its obligations under existing contracts with biomass and biogas resources. The Commission also finds that RECs associated with energy generated by biogas and biogas facilities shall remain eligible through 2029 (i.e., ending in 2030) for the purpose of counting towards LSE Tier 1 obligations. This finding is also consistent with the plain language of PSL §66-p, which precludes energy from these facilities from qualifying under the 70 by 30 Target, which is binding on the Commission in 2030. Given the significant monetary support underlying the Tier 1 program and the need to protect ratepayers from funding resources that will not

contribute to State goals, the Commission rejects any new tiers or programs for these resources.

2. Hydroelectric Resources

While the CLCPA includes all hydroelectric resources as renewable energy systems, Appendix A of the CES Framework Order places additional restrictions on such resources. The CES Framework Order makes eligible for Tier 1 those hydroelectric resources that either (1) constitute new or existing low-impact run-of-river facilities, or (2) for other existing facilities, to the extent of their incremental production associated with upgrades so long as such upgrades do not include new storage impoundments. The White Paper proposes to continue to impose the same eligibility requirements on hydroelectric resources found in Appendix A of the CES Framework Order for all future Tier 1 solicitations. However, as explained below, the White Paper also proposes that the Commission authorize NYSERDA to procure RECs from a broader array of hydropower resources under a new Tier 4, so long as the associated energy does not involve new impoundments and is shown to be additional to the supplier's baseline production of renewable energy. New impoundments were excluded from the recommendations in the White Paper because of the environmental damage that may result and the potential for greenhouse gas emissions to increase, contrary to the explicit goals of the CLCPA. The Commission finds this reasoning to be sound and thus adopts the requirements for hydroelectric resources noted above.

3. Fuel Cells and Resources that Use Hydrogen

Appendix A of the CES Framework Order included fuel cells as eligible technologies without regard to fuel source. However, the CLCPA includes fuel cells within the definition of renewable energy systems only to the extent that they "do not utilize a fossil fuel resource in the process of generating

electricity.”²⁵ Thus, the White Paper proposes eligibility be limited to those fuel cells that utilize a non-fossil fuel resource, such as hydrogen (or other fuel), that has been produced using a renewable energy system as a primary energy source. The White Paper proposes that NYSERDA be directed to maintain all active fuel cell contracts and that RECs produced from fuel cells subject to existing contracts that otherwise do not qualify as “renewable energy systems” under PSL §66-p(1)(b) should continue to be eligible for Tier 1 compliance through 2029.

Several commenters assert that the White Paper’s proposal regarding eligible fuel cells is too narrow considering the language of the CLCPA. For example, ACE NY argues that, because biomass and biogas are not technically fossil fuels, fuel cells that use these fuels should be considered “renewable energy resources” under §66-p(1)(b). ACE NY adds that the process of anaerobic digestion does not add new carbon into the naturally occurring cycle and it removes methane – a more pernicious global warming pollutant – from the cycle. Bloom Energy likewise argues that biogas is not a fossil fuel and thus biogas-powered fuel cells should be eligible as a renewable energy system. Bloom Energy also notes that fuel cells convert renewable fuel (either biogas or renewable hydrogen) electrochemically (without high temperature combustion), resulting in far less greenhouse gas emissions than from fossil fuel combustion.

IPPNY argues that biofuels and biomass are renewable fuels, not fossil fuels and thus fuel cells that use biofuels should be eligible resources under the CES. NFCRC recommends that biogas and hydrogen be included in CES eligibility as a

²⁵ PSL §66-p(1)(b).

non-fossil fuel resources for fuel cell systems. NFCRC notes that biogas and hydrogen are zero-emission sources of generation for power and heat. NFGDC also argues that technologies such as new dispatchable electric generation facilities that utilize renewable natural gas (RNG), renewable hydrogen gas, carbon capture and sequestration (CCS), and energy storage resources should be encouraged and deployed into the State's overall energy mix. NFGDC adds that ongoing technological developments are revealing that hydrogen can be utilized in advanced dual-fuel combined cycle turbines in hydrogen/power-to-gas (P2G) applications. RNG Coalition asserts that energy from fuel cells derived from non-fossil fuel inputs such as renewable natural gas must be CES eligible for consistency with the CLCPA.

Plug Power asserts that renewable green hydrogen will play a more pivotal role in fueling energy systems in the future and thus must receive robust support under the next round of CES initiatives. Plug Power argues that a fuel cell utilizing hydrogen in the process of generating electricity is not utilizing a fossil fuel with respect to hydrogen produced from grid power and should be eligible under the CLCPA. Shell contends that the White Paper recommendations for the use of green hydrogen should be expanded so this resource can assume a larger role in meeting State energy policies, particularly in enabling a transition to a climate-neutral energy system.

LIPA seeks further explanation of the White Paper's proposed end date of 2029 for RECs produced from biomass, biogas, or ineligible fuel cell projects subject to existing contracts, and recommends that existing fuel cell contracts executed in good faith prior to CLCPA enactment remain Tier 1 REC eligible until the CLCPA requirement of 100% carbon-free electric generation by 2040 becomes effective.

The Commission agrees with those commenters asserting that PSL §66-p(1)(b) requires fuel cells to be considered "renewable energy resources" to the extent fueled by non-fossil fuels like biomass,²⁶ biogas, or hydrogen. As they correctly note, PSL §66-p(1)(b) includes "fuel cells which do not utilize a fossil fuel," and biomass, biogas, and hydrogen are not fossil fuels. The Commission thus finds that fuel cells that use biomass, biogas, hydrogen, or other non-fossil fuels to be eligible for RES procurements. However, we interpret the term "utilize a fossil fuel" broadly to require that the non-fossil fuel inputs to otherwise eligible fuel cells be produced and/or manufactured through a process that does not include the combustion or electrolysis of fossil fuels, or the use of fossil fuel or non-renewable grid power in the conversion process. In other words, fuel inputs must be produced using a renewable energy system as a primary energy source in order for the fuel used in the fuel cell to be eligible. Thus, a fuel cell that uses a biofuel or hydrogen produced through a process that includes the combustion or electrolysis of fossil fuels will not be eligible.²⁷

B. Load Forecasts and the 70 by 30 Target

The White Paper proposes to determine the amount of new renewable energy necessary to meet the 70 by 30 Target by subtracting the contribution of currently operating and already-contracted renewable energy projects from an estimate of

²⁶ Biomass is eligible as a renewable fuel source only if it is gasified using a process that utilizes a renewable energy source in the conversion process.

²⁷ A fuel cell that uses biofuel manufactured through a process that uses grid power would also be ineligible because the electric grid carries electricity from non-renewable resources.

statewide electric load in 2030. The White Paper forecasts the statewide electric load in 2030 to be 151,678 GWh of wholesale energy requirements and uses this load projection to establish RES procurement targets. Multiplying the 151,678 GWh (year 2030) load projection by 70% produces an estimate of 106,174 GWh of renewable electricity that must be operating in 2030 to meet the 70 by 30 Target. The White Paper further estimates that approximately 63,317 GWh of renewable energy are already either in operation, under contract, or separately required by statute. Therefore, subtracting that figure from the 106,174 GWh total yields 42,858 GWh, which is the incremental quantity of renewable energy that must be obtained through new RES and offshore wind solicitations in order to meet the 70 by 30 Target.

When taking into consideration the contribution of offshore wind discussed more fully below, the White Paper estimates that approximately 24,990 GWh must be secured through RES, mainly through the Tier 1 program. To ensure that a sufficient number of projects are operating in 2030, the White Paper proposes that the full 24,990 GWh of incremental renewable energy be procured no later than 2026. Additionally, the White Paper proposes that any renewable generation procured through Tier 4, as well as any distributed solar that may be deployed after achievement of the 6 GW target required pursuant to PSL §66-p(5), should be used to reduce the renewable generation that must be procured through Tier 1. The White Paper proposes that these procurement estimates be updated through the annual divergence test as the decade progresses.

The Commission finds the methodology used in the White Paper to be sound and thus adopts both the initial load forecasts and procurement targets proposed therein as summarized above. The Commission also directs DPS Staff and NYSERDA to

provide annual updates of both the load forecasts and procurement targets to assure that the renewable energy projects being developed are on schedule to meeting the 70 by 30 Target and that adjustment to procurement targets are timely made.

Some commenters assert that the load projections relied upon in the White Paper may be understated in light of the potential for more rapid deployment of electric vehicles and greater increases in building electrification. They argue that such developments would result in a higher estimate of load by 2030 than the load forecast presented in the White Paper. The Commission recognizes that, like with any forecast, the forecasts presented in the White Paper will likely require adjustment as actual data is received. Nevertheless, the Commission does not find the forecasts to be artificially low and reaffirms that adjustments to the load forecasts, annual procurement targets, and LSE obligations will be handled in the annual divergence test. The Commission discusses this annual process in the next section.

In its comments, LIPA notes that the new renewable generation required to meet the 70 by 30 Target falls into three distinct categories: (1) new offshore wind; (2) distributed solar; and (3) Tier 1 and Tier 4 REC procurements. LIPA explains that NYSERDA's costs for REC procurements are allocated to LSEs according to each LSE's load ratio share; however, no LSE-specific targets have been established for distributed solar. LIPA asserts that failing to establish LSE-specific targets for distributed solar may result in LIPA bearing a disproportionate share of cost-shifts, given the success of its net metering programs. To remedy this, LIPA proposes that the State's 6 GW distributed solar goal be similarly allocated to each LSE according to its load ratio share, and each LSE's Tier

1 and Tier 4 REC obligation be adjusted to reflect whether it exceeds or falls below its distributed solar allocation.

The Commission agrees that LIPA's behind-the-meter program has been successful and that it may be contributing more on a load ratio basis to the 6 GW solar target under the CLCPA than other LSEs. However, LIPA's proposal to get credit for its contribution to that target under Tier 1 did not receive sufficient review from and comment by other stakeholders to support a decision at this time. Therefore, the Secretary shall issue a notice requesting comments on LIPA's proposal to build a more detailed record, following which the Commission will determine whether adoption of LIPA's proposal or other action is warranted.

C. Modifications to the RES Tier 1 Program

1. Annual Solicitations

As discussed above, approximately 24,990 GWh of energy from new Tier 1 resources will be needed to achieve the 70 by 30 Target. To achieve this amount of incremental generation, the White Paper proposes average annual Tier 1 procurement targets of approximately 4,500 GWh per year over the 2021 to 2026 period, assuming an attrition rate of 20%. The White Paper proposes that NYSERDA be authorized to conduct annual Tier 1 solicitations, beginning in 2021, in amounts necessary to achieve the 70 by 30 Target, but with neither minimum nor maximum quantity limitations in any given year. Additionally, the White Paper proposes that NYSERDA be allowed to move forward without conducting makeup solicitations in the event that an annual solicitation procures less than the 4,500 GWh per year target. The White Paper proposes instead that NYSERDA be directed to annually revise the average annual amount of renewable generation required to be procured to reach the 70 by

30 Target, taking into account the most recent data for the year, with the goal to make up any shortfalls in the following year's solicitation. The White Paper proposes to make these adjustments to the annual average procurement targets through the divergence test process.

ACE NY supports the 4,500 GWh per year annual target over the 2021-2026 period. However, ACE NY proposes an annual solicitation date of May 1 each year with the requirement to conduct a makeup solicitation in any year where the 4,500 GWh target is not achieved. Avangrid supports the flexibility proposed in the White Paper with respect to annual procurement targets, though it recommends establishing a minimum annual procurement target and proposes that NYSERDA be required to file with the Commission any plans to deviate significantly from the 4,500 GWh per year annual target.

Boralex supports the proposal to procure 4,500 GWh of new Tier 1 renewable energy annually and, for purposes of predictability, sees no reason to depart from the current process. Borrego similarly emphasizes the importance of predictability in annual solicitations and comments that the absence of a minimum procurement capacity may create significant uncertainty that disrupts development timelines. For its part, CEA supports affording NYSERDA the flexibility to procure more than 4,500 GWh in a given year. Additionally, CEA proposes that NYSERDA be required to conduct a makeup solicitation if it falls 1,000 MW or more behind the 4,500 GWh per year target.

The City and the Named Utilities comment that the Commission should continue to oversee NYSERDA's procurement activities to both ensure that customer rates remain just and reasonable and avoid any unexpected or unreasonable electricity bill impacts. The City and the Named Utilities also recommend

that NYSERDA be required to notify the Commission of any plans to deviate significantly from the projected annual GWh levels.

EDFR supports the flexibility proposed in the White Paper but urges some level of consistency in the procurement process by establishing predictable solicitation schedules and requiring NYSERDA to procure at least 75% of the annual targets each year. EDFR also recommends that NYSERDA conduct makeup solicitations in any year that the target is not reached. LIPA supports affording NYSERDA flexibility in annual procurement capacities but suggests the establishment of a reasonably predictable procurement trajectory to provide stable market signals. MI supports the proposed flexibility but cautions that NYSERDA should use this discretion judiciously and to adjust its procurements as needed to respond to market signals, subject to active oversight by the Commission and Staff.

Finally, Shell states that a consistent procurement schedule with flexibility to respond to market conditions would improve investment certainty. It nevertheless asserts that NYSERDA should not be permitted to cancel procurements based on past solicitation successes.

The Commission agrees with the element of the White Paper proposing that NYSERDA be given the flexibility to respond to market conditions regarding its solicitations. Allowing such flexibility will facilitate a cost-effective procurement process that reflects the most recent market developments. The Commission also agrees with the comments supporting some level of certainty in the procurement schedule. The commitment to offer a solicitation each year with a target of 4,500 GWh per year would provide sufficient certainty to investors that will allow effective planning and other market-based activities to develop. The Commission therefore declines to adopt minimum or maximum GWh requirements for each solicitation, instead allowing

NYSERDA to adjust annual procurement targets based on its annual review of the latest market data by means of the divergence test. This data would include the procurement activities of non-jurisdictional LSEs, updated information on project attrition, changes in project load, and parallel project development amongst offshore wind and distributed solar.

However, the Commission directs NYSERDA not to include projected Tier 4 contributions in its divergence test calculation in a manner that would reduce the expected schedule of Tier 1 procurements. There are several reasons why excluding projected Tier 4 contributions from the Tier 1 procurement calculations is the conservative and prudent course at this time. First, Tier 4 projects not located in Zone J will be associated with newly developed transmission and thus may face a higher risk of attrition than projects in other tiers. The risk of attrition is compounded by the prospect that, if load exceeds current projections, the State could end up needing the full contemplated schedule of Tier 1 procurements in addition to procurements under Tier 4. Although NYSERDA will update its load projections in the divergence test annually, a rapid increase in electric vehicle adoption or building sector electrification in the 2020s might not be predicted in time to adjust the Tier 1 procurement targets in time to meet 70 by 30. Second, Tier 1 resources have concentrated in upstate regions, while Tier 4 would concentrate exclusively in Zone J. Thus, from a planning perspective, there is no necessary conflict in proceeding with robust procurement targets for each tier. And, were the State to overperform modestly on the 70 by 30 Target, that overperformance would inure to its benefit in planning for the 2040 Zero Emission Target.

Additionally, as discussed more fully below in Section I, in all future Tier 1 procurements NYSERDA is directed to

continue to take measures to ensure that the interests of disadvantaged communities are explicitly valued in the selection process, and build upon its workforce development policies to specifically promote good jobs in disadvantaged communities, including the broadest possible application of prevailing wage requirements in NYSERDA agreements, and procurement policies that reward community workforce agreements, apprenticeship programs and other training programs in disadvantaged communities.

2. Project Viability

The White Paper proposes that the Commission authorize NYSERDA to reject a proposal outright upon a unanimous determination by the Technical Evaluation Panel (TEP) that the project is not presently viable.²⁸ The White Paper further proposes that, if the TEP concludes that a project is not presently viable, the project would be removed from consideration and the applicant notified of such finding. The White Paper explains that projects rejected during the viability phase of the evaluation would be permitted to re-apply in future RES solicitations and evaluated again without prejudice. The White Paper also proposes to combine two evaluation factors into one, with a combined weight of 20%: project viability, operational flexibility and peak coincidence.

Several parties commented on this aspect of the White Paper. Anbaric supports rejecting non-viable bids outright, although it argues that the viability weighting should be

²⁸ The White Paper notes that the TEP may make such a determination on several grounds, including that the project (1) is in a state of immaturity making it difficult to ascertain its viability, (2) appears to be predicated on unrealistic economic or regulatory assumptions, or (3) faces serious economic or regulatory risks for which the project developer has not provided satisfactory mitigation plans.

increased to 30% to reflect its fundamental importance. Borrego also supports the increased emphasis on project viability, stating that nonviable, low-cost bids that do not reflect the true costs of delivering renewable energy are disruptive and damaging to the solicitation process. The City recommends the development of additional sub-categories of criteria related to viability, including project benefits accruing to disadvantaged communities, reductions to criteria pollutants, and mitigation of cumulative greenhouse gas emissions.

The City, EDFR, and IPPNY each comment that NYSERDA should provide transparency into any determination that a project is not presently viable. LIPA supports the proposed change to project viability so long as NYSERDA's solicitations provide a sufficient level of detail to allow a developer to understand how a determination of nonviability would be arrived at. IPPNY further recommends that rejected bidders be given the opportunity to appeal NYSERDA's determination.

Boralex and EDFR support the proposal to combine viability factors. Borrego comments that the proposal to combine viability factors into one 20% category does not adjust the overall price/non-price evaluation ratio and is thus unlikely to offset issues surrounding congestion and curtailment. KCE strongly supports the proposal to combine the project viability criteria with the operational flexibility and peak coincidence criteria in Tier 1 bid evaluations.

The Commission finds that the White Paper's proposal to increase emphasis on project viability is appropriate on the grounds that high levels of project attrition can negatively impact program budgets and success. While the current viability evaluation factor weighted at 10% is sufficient to differentiate among projects that have a reasonable likelihood of success, it is inadequate for screening out projects unlikely to succeed.

The White Paper correctly points out that considerations regarding operational flexibility and peak coincidence will be increasingly intertwined with project viability as more renewable energy is added to the grid. Consolidating these categories will allow bid evaluators to better incentivize projects that are dispatchable and have peak coincident production with the grid so as to avoid to the greatest extent possible curtailment, local reliability constraints, and burdensome interconnection requirements. Moreover, the proposal to combine project viability with operational flexibility and peak coincidence as viability factors will align Tier 1 procurements with the approach authorized by the Commission for offshore wind procurements.²⁹ For these reasons, we adopt the recommendations in the White Paper and direct NYSERDA to combine into a single evaluation factor project viability with operational flexibility and peak coincidence, and apply a 20% weight to the combined factor.

For the reasons outlined in the White Paper, we also accept the proposal authorizing NYSERDA to reject a response to a solicitation based upon the unanimous determination by the TEP that the project is not presently viable. Relatedly, for purposes of transparency, we direct NYSERDA to include in future Tier 1 solicitations information regarding how the TEP would determine that a project is: (1) immature to such an extent that it would be impossible to ascertain whether it is viable; (2) predicated on unrealistic economic or regulatory assumptions; or (3) subject to serious economic or regulatory risks without a sufficient mitigation plan. Additionally, when a project is rejected based on an evaluation of viability, NYSERDA shall

²⁹ Case 18-E-0071, In the Matter of Offshore Wind Energy, Order Authorizing Offshore Wind Solicitation in 2020 (issued April 23, 2020), p. 18, fn. 16 (2020 Offshore Wind Order).

provide notice to the applicant that sufficiently explains this determination.

3. New Portfolio Risk Factors

The White Paper recommends that the Commission authorize NYSERDA to develop new portfolio risk factors intended to take account of the interactive effects caused by the increasing penetration of renewable energy resources on the grid. The new portfolio risk factors include: the geographic concentration of projects with similar generation profiles; portfolio-wide dependence on particular technology types; impacts of potential curtailment portfolio-wide; and impacts on network upgrade costs, congestion, and transmission development in general. As proposed, NYSERDA would consult with Staff, the NYISO and the distribution utility as necessary to develop each risk factor and determine the extent that it would be applied in the selection process. The White Paper proposes that, should a new portfolio risk factor be adopted through this consultation process, NYSERDA would publish a detailed description of the factor in its solicitation to allow bidders to make any adjustments to their projects, and that such description would include how the portfolio risk factor is used in the selection process.

Finally, the White Paper solicits comments on other potential measures designed to avoid curtailment and other negative impacts that may develop from a prevalence or concentration of renewable resources. An example of such a measure provided in the White Paper would have NYSERDA acquire without additional compensation any REC generated in hours and at locations where the applicable real-time location-based marginal price (LBMP) is negative.

Many commenters support the use of new portfolio risk factors but raised concerns regarding implementation, including

potential curtailment and obtaining RECs at no cost when the LBMP is negative. For example, ACE NY noted its support for consideration of issues related to transmission congestion and curtailment, but recommends that the renewable industry have the opportunity to review and comment on any new evaluation criteria prior to their finalization. For its part, the City urges the Commission to design a system that procures sufficient quantities of complementary resources and systems with dispatchable qualities to reduce, to the greatest extent possible, the potential for curtailment.

Nucor, LIPA, Named Utilities and NYPA support the proposal to acquire RECs without additional compensation when LBMPs are negative. NYPA noted that acquiring RECs under this condition would incentivize generation owners to bid at or above \$0/MWh to avoid causing negative LBMPs and forfeiting their RECs to NYSERDA. The NYISO cautions, however, that this approach would expose renewable resources to the market impacts of negative LBMPs without the protection of a REC payment for the MWhs produced, and result in several potential unintended consequences, including: (1) REC payments that insulate resources from the impacts of negative LBMPs; (2) reducing the financial consequences to developers siting resources in transmission-constrained regions; (3) dampening the market signal that may otherwise encourage technology innovation; and (4) affecting the market revenue to other resources that may also be needed to achieve the State's environmental mandates while maintaining reliability.

EDFR argues that obtaining RECs at no cost when the LBMP is negative would do little to achieve the stated policy objective of avoiding curtailment. ACE NY opposes the proposal that NYSERDA obtain RECs at a price of zero when the LBMP is negative, asserting that such an approach would not influence

location selection and address issues of dispatchability. IPPNY argues that obtaining RECs at a price of zero when the LBMP is negative does not adequately address the curtailment issue. Instead, IPPNY proposes that Staff work with the NYISO to modify the Market Information System (MIS) rules to ensure that the dispatchability of existing and contracted renewable facilities is not threatened with curtailment by subsequently interconnected renewable facilities. IPPNY asserts that any necessary tariff revisions be effective before the next REC solicitation.

We start by examining the existing solicitation process and then address the concerns raised by commenters. The Tier 1 solicitation process includes a portfolio risk assessment that is performed after the TEP has produced a preliminary ranking of bids.³⁰ The risk assessment applies limits to the portfolio as a whole, so long as those limits do not increase the generation-weighted average cost of the portfolio by more than 10%. These limits are: (1) an 80% limit on any one technology type; (2) an 80% limit on any one project owner, including affiliates; and (3) a limit on the project owner being awarded bids equating to capacity that is more than five times greater than the renewable capacity that the owner has successfully developed in New York to the point of commercial operation.

As the White Paper correctly notes, there is a need to adjust the bid evaluation criteria to address the increase in market penetration of renewables and associated interactive effects on the grid that are expected to result from moving toward meeting the 70 by 30 Target. However, individual project applicants lack complete knowledge of other proposed projects

³⁰ See, Case 15-E-0302, Final Phase 1 Implementation Plan (filed March 24, 2017).

and thus would not be in a position to appropriately address the grid-related risks associated with their proposals. Therefore, the Commission finds that the development of new portfolio risk factors to analyze issues related to congestion and curtailment is appropriate. The Commission directs NYSERDA to develop these new factors in consultation with DPS Staff, as well as with the NYISO and the distribution utilities where appropriate. Any new portfolio risk factors developed shall be presented in detail in subsequent Tier 1 RFPs, including how the factors would be applied in the selection process.

Regarding other potential measures designed to avoid curtailment and other negative impacts that may develop from a prevalence or concentration of renewable resources, including the example provided in the White Paper where NYSERDA acquire without compensation any REC generated in hours and at locations where the applicable real-time location-based marginal price (LBMP) is negative. This proposal was made to address two concerns that would result from the use of Index RECs. The first concern involves providing strong incentives to developers to locate projects economically. If an Index REC contract perfectly insulated a project from all potential negative LBMPs, then the project would not receive any incentive to avoid the most congested locations. The second concern relates to sending strong hourly price signals to drive the economic dispatch of the units.

It should be recognized that the Index REC method approved by the Commission does not perfectly insulate any particular generator from negative LBMP price signals. The index used is based on the simple monthly average of LBMPs at the zonal level. The Commission has determined that even if the monthly average LBMP is negative, the strike price is applied as

a ceiling to the Index REC Price payable.³¹ Currently, these zonal averages are very rarely negative. However, each generator is paid the LBMP specific to its individual generator node (when the LBMP is negative at its bus, this is equivalent to requiring the generator to pay the amount of the LBMP to the NYISO for each MWh generated). Thus, the generator still receives the relative price signal of how its specific location compares to the overall zonal monthly average.

For example, say the monthly zonal average LBMP turns out to be \$10 per MWh. This simple monthly average of all of the hourly LBMPs includes positive and negative LBMPs across all of the individual nodes (congested and uncongested) in the zone. This monthly zonal average LBMP of \$10 is applied to the Index REC Price calculation for all projects receiving Index REC Price payments in that zone. In any given hour, two projects with the same strike price could receive the same REC payment (if they each bid a strike price of \$30, this would result in a REC payment of $\$30 - \$10 = \$20$ for each MWh that month). A generator at an unconstrained location may receive an LBMP for each MWh in that hour of \$15 (for a total compensation of \$35), while a generator in a constrained location may "receive" an LBMP of -\$25 (for a total compensation of -\$5). Generators under the Index REC price structure are not insulated from negative LBMPs and still receive a fairly strong signal to seek out locations that are less constrained than others, and still receive differential hourly price signals. The "insulation" that occurs is at the zonal level and any negative LBMPs at the zonal level would be included in the simple average calculation and reduce the monthly zonal average. Negative LBMPs at the zonal level could become more frequent as increased penetration

³¹ Case 15-E-0302, Order Modifying Tier 1 Renewable Procurements (issued January 16, 2020), pp. 24-25.

of intermittent generation throughout the zone causes high level transmission congestion from zone to zone.

Given the above considerations, the Commission concludes that this issue need not be addressed for the next tranche of Tier 1 Index REC contracts. However, the Commission agrees with the NYISO that it would be beneficial for DPS and NYSERDA Staff to consult with the NYISO to discuss this issue further for possible future action.

4. Clarification of CES Delivery Requirements

The CES Framework Order established the following rules with respect to delivery requirements for out-of-state intermittent renewable generators:

Out-of-state intermittent renewable generators that participate in Tier 1 solicitations may sell and transmit energy as it is generated into the spot market of the control area of its location without simultaneous transmission into the New York Control Area, so long as an equal quantity of energy is transmitted out of the affected spot market into the New York Control Area for end-use during the same hour as the renewable generation is produced (hourly matching). Contractual deliveries associated with the out-of-state resource shall be recognized in each hour as the lesser of actual hourly metered energy production by the renewable generator or actual hourly energy delivered to the electric energy purchaser in the New York Control Area for end-use. In addition, if the control area of origin has an attributes accounting and tracking system or an environmental disclosure program, it is required that such system and/or program recognize hourly matched transactions without double counting the attributes in any jurisdiction.³²

NYSERDA and DPS Staff have since implemented a set of requirements to effectuate the Commission's stated environmental objectives. For example, renewable generators located in adjacent control areas must ensure as part of their Tier 1 contract that the electricity associated with their RECs is (1)

³² CES Framework Order, Appendix A, p. 7.

scheduled, transmitted, delivered, and settled in the NYISO energy market on an hourly basis, and (2) accompanied by documentation of a unit-specific contract path between the injection point in the control area of origin to the delivery point in New York.

Documentation of a unit-specific contract path must indicate the provision of transmission rights for delivering the generation via the NYISO using the North American Electric Reliability Corporation (NERC) tag fields "Sending and Receiving Control Areas," "Purchasing/Selling Entity Name," and "Number." For imported RECs to be flagged as eligible for Tier 1, projects located in an adjacent control area will need to continuously demonstrate the delivery of energy and RECs into New York State through the requirements laid out in the Final Phase 1 Implementation Plan. Tier 1 eligible energy scheduled and delivered from external control areas must be accompanied by the NERC tag information from an outside organization such as the Open Access Technology International (OATI) System identifying the importing project as the source for the scheduled and transmitted electricity into the NYISO. NYSERDA then uses the information from OATI or a similar system to ensure that the requirements set forth in the Final Phase 1 Implementation Plan have been satisfied. The White Paper proposes that the Commission formally adopt the practices already being implemented to effectuate the Commission's environmental objectives as related to out-of-state intermittent renewable generators for the purpose of regulatory certainty.

Notably, there were no comments submitted regarding this aspect of the White Paper, which the Commission takes to mean that there are no objections to the current rules and practices related to out-of-state, intermittent renewable resources. Accordingly, the Commission reasserts the rules

established in the CES Framework Order, and adopts the practices noted above, and detailed in Appendix B.

5. Revision to Tier 1 LSE Obligations

In consideration of the expected level of available RECs throughout the three-year period ending in 2023, the White Paper proposes to adjust downward the LSE Tier 1 REC obligations for 2021 through 2022 to reflect the permitting and construction delays associated with projects. In consideration of the expected level of available RECs throughout the three-year period ending in 2023, the White Paper proposes to adjust downward the LSE Tier 1 REC obligations for 2021 through 2022 to reflect the permitting and construction delays associated with projects that have entered into CES Tier 1 contracts and the reduction in the production of RECs that will result from these delays. Specifically, the White Paper recommends adjusting the current LSE Tier 1 obligation for 2021 from 4.20% to 2.04% and adjusting the current LSE Tier 1 obligation for 2022 from 8.40% to 5.61%. The White Paper also proposes a 2023 LSE Tier 1 obligation of 8.20%. The White Paper bases these adjustments on (1) the sum of Tier 1 RECs expected to be generated in each year from projects under contract under Renewable Portfolio Standard (RPS) Main Tier solicitations conducted through 2016 plus expected Tier 1 RECs procured through RES solicitations by NYSERDA, as they become operational, plus those behind-the-meter RECs from new distributed renewable energy resources that are deemed eligible (facilities receiving Tier 1 RECs under the Value of Distributed Energy Resources), divided by (2) the forecasted aggregate jurisdictional load.³³

³³ Renewable facilities that receive compensation for the environmental component of the Value Stack in VDER (the "E-value"), are required to assign the RECs generated by such facilities to the interconnecting utility. The utility may use such RECs to satisfy the Tier 1 obligation.

Of the few comments received on this topic, NYMPA states support for the adjustments proposed for the 2021 and 2022 obligation years but adds that they are insufficient and should be adjusted to levels reflecting the actual availability of RECs. It states that there are simply not enough RECs available to meet the established targets, and that the continued collection of ACPs for compliance contributes nothing to the State's goals. NYMPA notes that, if the updated 2021 and 2022 obligation targets are adopted, the LSE obligation for 2020 would be nearly 40% higher than for 2021, despite a projected 90% shortfall in available RECs for 2020. NYMPA asserts that this unrealistically high target would ensure that LSEs have no choice but to use higher cost ACPs for compliance. For its part, Named Utilities state that due to the likelihood that ACPs will continue to feature prominently in compliance obligations, the Commission should take a measured approach to the calculation of ACPs and ensure that the monies collected are used to benefit customers.

The Commission agrees that it is appropriate to adjust the current LSE Tier 1 obligations to reflect the expected level of available RECs in the short term. The approach for calculating these obligations utilized by NYSERDA and DPS Staff in the White Paper is consistent with the CES Framework Order, as well as the Commission's November 2016 Clarification Order.³⁴ Delays in project development underscore the importance of addressing deployment barriers, particularly those related to permitting. While the Commission expects that the actions taken pursuant to the Accelerated Renewable Energy Growth and Community Benefit Act (Accelerated Renewables Act) will

³⁴ Case 15-E-0302, Order Providing Clarification (issued November 17, 2017).

significantly alleviate permitting delays, revision of the current LSE obligations is appropriate in light of present circumstances.

The Commission agrees with the adjustments proposed in the White Paper with respect to LSE REC obligations for 2021 and 2022, finding the methodology underlying the adjustments to be reasonable. We disagree with NYMPA that further reductions for those years are needed, as the White Paper's methodology for calculating the 2021 and 2022 LSE obligation adjusts the number of RECs that are expected to be available in each program year, after accounting for project delays and attrition. As a result, a further reduction for these years is not warranted at this time. The Table below provides the LSE Tier 1 obligations for the next three years.

	Current LSE Tier 1 Obligation	Revised LSE Tier 1 Compliance Obligation
2020	2.84%	2.84%
2021	4.20%	2.04%
2022	8.40%	5.61%
2023		8.20%

D. Modifications to the Offshore Wind Standard

The White Paper recommends that the Commission formally adopt the CLCPA's minimum statewide goal of 9 GW of offshore wind by 2035 and grant NYSERDA authority to procure the remaining amount of ORECs necessary to achieve that goal. As noted in the White Paper, there are 1,826 MW of offshore wind currently under contract statewide, leaving approximately 7,200 MW to be procured to meet the CLCPA target.³⁵ The White Paper proposes that NYSERDA conduct offshore wind procurements in a manner that ensures, at a minimum, cumulative contracted

³⁵ This remaining amount could be reduced by up to 2,500 MW depending on the outcome of NYSERDA's 2020 solicitation.

capacity equivalent to between roughly 750 MW and 1,000 MW per year through 2027. This schedule would allow for any supplemental procurements that may be necessary to replace previously selected projects that have not gone forward. Consistent with the Tier 1 solicitation discussion above, the White Paper proposes that NYSERDA have the flexibility to respond to market and regulatory dynamics and make adjustments based on its past record of procurements. The White Paper thus proposes that NYSERDA have no minimum or maximum procurement requirements for any one solicitation, stating that NYSERDA should be free to take a long-term view and evaluate each contract award decision with a focus on both ensuring CLCPA compliance and obtaining the best overall value.

Regarding transmission, the White Paper notes that the potential for backbone networks or other non-radial solution options is subject to an ongoing study of potential offshore transmission networks. Additionally, the White Paper points out that the Bureau of Ocean Energy Management (BOEM) has yet to lease additional wind energy areas (WEAs) where eligible projects could be built, noting that it appears that no new WEAs will be available for leases until 2021 at the earliest. While the White Paper does not make any recommendations with respect to transmission related to offshore wind projects, it proposes that, if warranted, NYSERDA would seek Commission approval to pursue alternatives to radial transmission as part of its offshore wind procurements.

Recognizing that there may be offshore wind projects that are developed for delivery into the New York Control Area (NYCA) without NYSERDA's involvement, the White Paper recommends that LSEs be free to procure ORECs directly for compliance and that NYSERDA will reduce its own procurement targets accordingly. The White Paper also recommends that the

Commission grant NYSERDA authority to re-sell ORECs to non-LSE buyers, provided that it do so at a cost no less than it sells to LSEs.

Turning to offshore wind in the Great Lakes, the White Paper proposes the development of a feasibility study to consider wind energy development in Lake Erie and Lake Ontario through a framework that balances environmental, maritime, economic, and social issues with consideration of market barriers and costs. The White Paper proposes that such a feasibility study consist of three primary components: Stakeholder outreach, analysis, and policy options.

Many commenters support the formal adoption of the CLCPA's minimum statewide goal of 9 GW of offshore wind by 2035 and further support authorizing NYSERDA to procure the remaining number of ORECs necessary to achieve that goal without additional authorization from the Commission. Anbaric disagrees with the White Paper's statement that the potential for backbone networks or other non-radial solution options remain dependent on ongoing studies and encourages the Commission to authorize NYSERDA to conduct one or more direct access offshore wind transmission procurements in the future. Although Anbaric recognizes that delays by BOEM to lease additional wind energy areas in the New York Bight have made it more difficult to plan an ocean-based transmission grid serving New York's electricity customers, it states that essential work of upgrading the onshore electric grid to absorb 9 GW of offshore wind energy can and should be done regardless of the ultimate location of the New York Bight lease areas.

ASOW recommends that NYSERDA be directed to publish a schedule for future offshore wind generation solicitations but be given sufficient flexibility to manage its offshore wind solicitations to address market and regulatory dynamics.

However, ASOW recommends that minimum procurement levels be prescribed in order to provide certainty to developers and further recommends that NYSERDA not be permitted to delay or cancel a future offshore wind solicitation.

CEA argues that NYSERDA should meet a multi-year minimum for total offshore wind capacity that does not impose a minimum procurement level for any one solicitation. CEA suggests that the Commission require NYSERDA to notify it via a public report when it seeks to deviate substantially from the projections. CEA recommends including in future solicitations the requirement for developers to pay prevailing wages, secure Project Labor Agreements, and apply environmental and fisheries mitigation plans incorporating Best Management Practices per the July 2020 RFP. Further, CEA recommends NYSERDA study the contracting mechanisms employed to date to evaluate their cost-efficacy for ratepayers and the need for additional or alternative contracting mechanisms in the future. CEA suggests that solicitations continue to prioritize benefits to disadvantaged communities with additional clarity around the types of benefits to be considered.

CCE urges NYSERDA to continue the evaluation of environmental and fisheries mitigation plans in future solicitations. While CCE supports the model of having no set maximum or minimum procurement requirements each year, it notes that it is still important for New York State to set some benchmarks and a timeline to ensure that the 9,000 MW goal is achieved by 2035. CJNY supports the Commission's efforts to evaluate offshore wind proposals according to a best value procurement system that weights the overall economic impact of each proposal.

EDFR is generally supportive of NYSERDA being provided flexibility with respect to the timing of the procurement

process so as to respond to market conditions, though it suggests that NYSERDA set a solicitation schedule that includes minimum procurement levels and cautions against giving NYSERDA general authority to delay or cancel future offshore wind solicitations. LIPA suggests that NYSERDA balance the future procurement trajectory against continuous technological improvements, declining offshore wind costs, permitting considerations and timing, and the identification of required transmission system upgrades and cost allocation.

NYOWA generally supports the White Paper's proposal that NYSERDA have no minimum or maximum procurement requirements for any one solicitation. It nevertheless suggests that NYSERDA be directed to consider five factors when planning the timing and size of offshore wind solicitations: (1) the delay in announcing new WEAs in the New York Bight; (2) the fact that new WEAs and leases will inevitably bring new leaseholders into the New York energy market and additional bidders into future solicitations, thus promoting greater competition and more competitive bids; (3) the status of potential federal tax incentives in timing solicitations; (4) the coordination with other states that are conducting solicitations so as to stagger solicitations accordingly and ensure that bidders have time to conduct proper due diligence and prepare competitive proposals that are responsive to New York State's needs and requirements; and (5) the inclusion of mechanisms to prevent shortfalls. NYOWA recommends that the Commission authorize the use of make-up solicitations in years during which procurements under the first solicitation fall below a certain capacity. Finally, NYOWA comments that, since the ongoing transmission studies and the BOEM process pertaining to the designation of wind energy areas in the New York Bight are both expected to be completed by

the end of this year, the State should give a high priority to addressing offshore transmission.

Regarding the proposal to sell ORECS to non-LSE buyers, Environmental Entities supports the re-sale of ORECs by NYSERDA, though it maintains that ORECs sold to the voluntary market should not count toward the 70 by 30 Target. CEA likewise supports the re-sale of ORECs but does not agree that any ORECs sold to the voluntary market should count toward the 70 by 30 Target, instead stating that this obligation must be satisfied solely by LSEs. REBNY and Shell also support allowing NYSERDA to re-sell ORECs to voluntary purchasers. Shell also supports the recommendation to allow LSEs to procure ORECs directly for compliance and not directly from NYSERDA.

AGCNY supports the Great Lakes Wind Study on the grounds that the study, development, and construction of offshore wind energy development would create thousands of direct and indirect jobs in the western New York region. CCE encourages New York State to move forward with a feasibility study exploring the environmental, economic, maritime, social, and community impacts of developing offshore wind in the Great Lakes. NYOWA supports the White Paper proposal to conduct a feasibility study of Great Lakes offshore wind and agrees that it is prudent not to create a separate tier to support Great Lakes Wind.

The Commission agrees that the adoption of the CLCPA's statewide goal of 9 GW of offshore wind capacity by 2035 is a necessary and important step towards achieving the 70 by 30 goal. Indeed, it is required under the CLCPA and implementation must begin now. NYSERDA's initial offshore wind solicitation on November 8, 2018, resulted in competitive bids far in excess of that capacity and confirmed the effectiveness of the Index OREC mechanism as well as other aspects of its procurement approach.

Given this success and the expanded 9 GW goal of the CLCPA, requiring NYSERDA to seek Commission approval for each future offshore wind solicitation would be an inefficient use of resources and would cause delay. Additionally, the proposed procurement schedule targets of approximately 750 MW to 1,000 MW of offshore wind capacity per year through 2027 will put the State on a trajectory to achieving the 9 GW goal. For the same reasons discussed above with respect to Tier 1 solicitations, the Commission grants NYSERDA the flexibility to take a long-term view when conducting offshore wind solicitations and declines to prescribe minimum or maximum procurement requirements for any one solicitation. Additionally, as discussed more fully below in Section I, NYSERDA is directed to continue to take measures to ensure that the interests of disadvantaged communities are explicitly valued in the selection process, and build upon its workforce development policies to specifically promote good jobs in disadvantaged communities, including the broadest possible application of prevailing wage requirements in NYSERDA agreements, and procurement policies that reward community workforce agreements, apprenticeship programs and other training programs in disadvantaged communities, in all future offshore wind procurements.

Given the need to meet the statutory timetable for offshore wind deployment, the Commission directs NYSERDA to consider measures that will incentivize timely project completion. In particular, NYSERDA should continue to consider project labor agreements and other standards as contract requirements to assure delivery of power by the intended commercial operation date, taking into account potential costs and benefits in the context of offshore wind construction and operation.

In recognition of the views expressed in the comments that more certainty regarding the procurement schedule is needed, the Commission weighs this consideration against the need for flexibility so that NYSERDA can respond to market conditions and obtain ORECs in the most cost-effective manner. As noted in the 2020 Offshore Wind Order, achieving the 9 GW goal "will require a rigorous, stable, and consistent timetable of solicitations, so establishing a forward, static schedule without flexibility to modify solicitation dates due to exogenous circumstances will merely introduce the risk of timetable slippage and the resulting investor uncertainty."³⁶ Thus, the Commission adopts the proposed annual procurement schedule but directs NYSERDA to file a letter with the Secretary should it intend to delay or cancel any individual solicitation. This letter shall include the reason for the delay or cancellation, as well as the anticipated timeline for the next solicitation. NYSERDA shall also have the authority to conduct makeup solicitations if necessary, to remain on a trajectory towards meeting the CLCPA goals. As urged by CEA and CCE, NYSERDA shall continue the evaluation of environmental and fisheries mitigation plans in future solicitations.

Regarding transmission facilities necessary to interconnect offshore wind, continued reliance on radial interconnections remains appropriate for the time being. As the White Paper points out, the lack of new WEAs where eligible projects could be built makes designing and evaluating coordinated transmission solutions such as a radial backbone system impractical at this time. NYSERDA and DPS Staff continue to study potential transmission alternatives and are considering the views of industry and other stakeholders, State and federal permitting issues, and the current constraints posed by the

³⁶ 2020 Offshore Wind Order, p. 18.

State's electrical grid. In response to Anbaric's comments that evaluation of onshore transmission upgrades necessary to accommodate 9 GW of offshore wind should be conducted quickly, the Commission notes that such studies do not require BOEM to first lease additional WEAs in the New York Bight and are already underway.

Additionally, Staff is expected to complete later this year the comprehensive studies directed by the Accelerated Renewables Act to evaluate the transmission, local distribution, and bulk distribution upgrades necessary to timely achieve the goals of the CLCPA. These studies will help inform the State as to the infrastructure upgrades needed to obtain 9 GW of offshore wind by 2035. For the time being, the Commission will continue to rely on direct radial connections while alternative transmission approaches are considered. Should the study identify advantageous alternatives to direct radial transmission and new WEAs are subsequently leased, NYSERDA shall seek Commission approval to pursue such alternatives through its offshore wind procurements.

Turning to the proposal to sell ORECS to non-LSE buyers, the comments express general support for this approach. However, Environmental Entities and CEA argue that any ORECS sold to the voluntary market should not count toward the 70 by 30 Target, with CEA asserting that the 70 by 30 Target must be satisfied solely by LSEs. Voluntary purchases of RECs have historically been considered and have counted towards the State's clean energy goals. Moreover, these purchases contribute to the amount of renewable energy consumed in the State and have been considered in establishing procurement targets. As discussed more fully below with respect to Tier 4, the Commission disagrees that the 70 by 30 Target can only be satisfied through LSE obligations and reiterates that voluntary

renewable purchases remains a critical component of the actions to be taken to achieve the 70 by 30 Target. Thus, all RECs and ORECs consumed by New York State load shall count toward the 70 by 30 Target, including voluntary purchases. Additionally, the Commission adopts the recommendation that LSEs need not obtain ORECs from NYSERDA and can instead purchase ORECs directly from generators to satisfy their offshore wind obligations.

Finally, the Commission adopts the proposal to conduct a feasibility study of Great Lakes offshore wind. Many commenters expressed support for this proposal and the Commission finds that considering the environmental, maritime, economic, and social issues as well as market barriers and costs is an important step toward assessing the overall value and viability of Great Lakes wind. The Commission also directs NYSERDA to commence this study with 180 days of the effective date of this Order. Following completion of the feasibility study, if a viable path forward for Great Lakes offshore wind is identified, any proposals to conduct a solicitation shall come before the Commission for consideration and decision.

E. Modifications to Tier 2

On January 27, 2020, NYSERDA submitted a petition (Tier 2 Petition) for a "Competitive Tier 2 Program" that would provide support to certain existing baseline renewable resources that are selected as part of three annual solicitations.³⁷ Each solicitation would seek to procure RECs associated with approximately one-third of the total MWh of generation from

³⁷ NYSERDA's Tier 2 Petition was filed in response to Governor Cuomo's Veto Message No. 204, which called for a "competitive program for existing renewables" designed to be "the most cost-effective strategy to provide qualified legacy renewable energy resources in New York State with appropriate support to continue to competitively operate and contribute to the State's clean energy goals."

eligible facilities, leaving a margin of RECs available for voluntary markets such as green power products or Community Choice Aggregations. NYSERDA asserts that this approach would promote competition with a goal of lowering costs and encouraging generators to submit reasonable bids based on need.

According to the Petition, the Competitive Tier 2 Program would utilize a modified version of the current solicitation format for the RES Tier 1 procurements. Eligibility to participate in the solicitations would be limited to wind and non-state-owned run-of-river hydroelectric generating facilities that entered commercial operation prior to January 1, 2015. Facilities under an active agreement with NYSERDA, including an agreement under Tier 1 associated with a facility upgrade or under the existing Tier 2 Maintenance program, would be eligible to participate in the proposed Competitive Tier 2 Program only to the extent that the facility's generation exceeds the generation at issue in the agreement.³⁸ Facilities selected in the solicitation would receive a standard three-year Tier 2 REC contract from NYSERDA. NYSERDA expects the staggered approach would provide an opportunity for most of the existing wind and hydropower generators to receive an award by the end of the program.³⁹ For existing facilities not selected under the Competitive Tier 2 Program that can otherwise demonstrate a financial hardship,

³⁸ For example, if a generator has an existing contract for only 10% of its output due to an upgrade, the remaining 90% would be eligible for a Tier 2 contract.

³⁹ Each Tier 2 facility would be limited to one Tier 2 contract during the Competitive Tier 2 program.

NYSERDA proposes that the Commission continue the existing Maintenance program, as adopted through previous orders.⁴⁰

The Tier 2 Petition proposes that NYSERDA, in consultation with Staff, would utilize a confidential maximum bid price to contain program costs and would not award a contract to a facility that exceeds the maximum bid price. With respect to eligibility, certification, procurement, LSE compliance and other reporting requirements, NYSERDA suggests that the proposed Competitive Tier 2 Program utilize processes similar to those currently in place for Tier 1. Additionally, NYSERDA proposes to revise and update the New York Clean Energy Standard RES Tier 1 Certification Submission Instructions and Eligibility Guidelines to establish threshold requirements for Competitive Tier 2 projects.

Under the Tier 2 Petition, eligible facilities would submit a bid as a combination of annual MWh and a dollar per Tier 2 REC/MWh bid. Contracts would be awarded based on the as-bid price, starting with the lowest bid until the total bid quantity approximates the solicitation's targeted MWh or the confidential maximum bid price is exceeded. Successful bidders would enter into three-year standard contracts with NYSERDA for the bid quantity at the bid price. NYSERDA proposes the term of the contract would be standardized to run from January 1 to December 31. Facilities would receive payments equal to the number of Tier 2 RECs delivered to NYSERDA's New York Generation Attribute Tracking System (NYGATS) account multiplied by the bid price. NYSERDA proposes that program funding be capped at \$200 million for Competitive Tier 2 Program REC purchases, roughly allocated evenly among the three proposed annual solicitations.

⁴⁰ NYSERDA suggests that facilities that participate in Competitive Tier 2 solicitations should not be prohibited from obtaining Tier 1 eligibility for an upgrade or repowering.

The Tier 2 Petition proposes that funding for the Competitive Tier 2 Program would be through a new Tier 2 REC obligation imposed on LSEs. NYSERDA and Staff would annually calculate a uniform per MWh rate that would be applied to each LSE's actual wholesale load to calculate each LSE's Tier 2 Monthly Obligation Payments. The LSE Tier 2 Rate would be applied to the wholesale load data NYSERDA receives from the NYISO. An LSE's Tier 2 Monthly Obligation Payment would be calculated by multiplying the LSE Tier 2 Rate by the number of MWh the LSE served, using the NYISO Version 1 load data, and Load Modifier Rate.⁴¹ Once NYSERDA receives the load data from the NYISO, NYSERDA would then determine the LSE's Tier 2 Monthly Obligation Payment and issue an invoice. Each LSE would submit its payment to NYSERDA within 15 days from issuance of the invoice.

NYSERDA proposes that a reconciliation process occur after the Tier 2 compliance year ends. NYSERDA would use the NYISO's Version 2 load data to reconcile the funds collected from each LSE to the funds necessary to meet its obligation, adjusting for load modifiers as described in the Phase 1 Implementation Plan.⁴² NYSERDA would reconcile the funds collected from the LSEs against NYSERDA's financial obligation relating to Tier 2 RECs - considering the actual adjusted statewide load and NYSERDA's actual payments to Tier 2 facilities during the referenced compliance year. NYSERDA also proposed and provided a standard agreement that would be used to govern Tier 2 REC transactions between NYSERDA and the LSEs.

⁴¹ The Load Modifier Rate is detailed in the Final ZEC Implementation Plan filed on October 21, 2019, in Case 15-E-0302 and provides a method to account for load modifier adjustments for LSEs that are subject to load modifiers.

⁴² Case 15-E-0302, Final Phase 1 Implementation Plan (filed March 24, 2017).

The Tier 2 Petition seeks to cover the costs and fees NYSERDA anticipates it would incur to administer the Competitive Tier 2 Program for the life of the program. The program is expected to begin in 2020 with the issuance of the first RFP and to continue through the final settlement, in 2026, of transactions in the last contract year (2025). NYSERDA requests administrative costs of \$5,542,486 million for duration of the program, 2020 through 2026. NYSERDA proposes to use the approach taken with other CES programs and use existing unspent System Benefits Charge (SBC), Energy Efficiency Portfolio Standard (EEPS), and/or RPS funds to cover administrative expenses.⁴³ NYSERDA expects to incur system development costs for the program and the issuance of RFPs and anticipated revision to NYGATS, as well as technical support for program review and review of the proposals. Additionally, NYSERDA indicates that the program would require 1.25 full-time equivalent (FTE) staff to issue three RFPs, to determine eligibility, and actively manage contracts resulting from solicitations. NYSERDA would also allocate a proportionate share of the annual New York State Cost Recovery Fee (CRF) to the Competitive Tier 2 Program. If annual actual cost allocations exceed the estimates, NYSERDA would reallocate approved but uncommitted administrative Competitive Tier 2 funds or would request approval for additional funds; any unspent Competitive Tier 2 Program administrative funds would be used for future ratepayer benefit. NYSERDA proposes to file quarterly itemized reports on Competitive Tier 2 administrative costs. Should the Petition be adopted, NYSERDA proposes to

⁴³ As discussed below, the White Paper modified this proposal and instead recommends that NYSERDA's administrative costs for Tier 1, Tier 2, and Tier 3 (ZEC program) be funded through an adder mechanism.

incorporate relevant elements of the program into existing schedules for CES reports.

There were a significant number of comments in response to the Tier 2 Petition, with a majority supporting the creation of a Competitive Tier 2 Program. Several comments also recommended modifications to elements of the Tier 2 Petition. For example, while stating its support for the program, ACE NY asserts that the program should be permanent and use a more aggressive procurement schedule than proposed in the Tier 2 Petition. ACE NY also argues that the program should not be capped at \$200 million, stating that program costs can still be controlled with the confidential maximum bid price.

3Degrees recommends the adoption of market sharing features with the Tier 1 program where LSEs can purchase RECs from NYSERDA or third-party suppliers, self-supply, or arrange alternative compliance payments. It notes that the present proposal would limit the market availability of Tier 2 RECs to ESCOs, impairing market liquidity and reducing participant diversity. 3Degrees argues that an approach by which RECs from Tier 1 and Tier 2 are indistinguishable would create a single, open, and competitive market for Tier 2 RECs, increase market participation and activity, and provide price signal clarity and transactional flexibility to benefit all market actors.

AHL recommends that bid caps be made public as part of the solicitation documents. Failure to publicize the cap, AHL claims, will likely result in depressed prices in the first-round, and higher prices in the third-round.

Brookfield argues that the element of the petition seeking to limit the program to a 2020 to 2025 timeframe leaves baseline resources unsupported for the five-year period leading up to the 2030 compliance deadline. Brookfield suggests a two-stage mechanism for Tier 2, with the first stage having NYSERDA

procure a large volume (75-85%) of Tier 2 RECs, to be followed by NYSERDA offering those RECs to voluntary purchasers at a discount in the second stage. Brookfield recommends that, for the first solicitation, NYSERDA enter into a 3-year contract for 75-85% of the available baseline as defined in the Petition, with subsequent solicitations procuring three-quarters of the available baseline.

Brookfield argues that the \$200 million program cap is arbitrary and unsupported by analysis. Instead, Brookfield recommends that the total program cost should be based upon how many MWh are offered below the confidential bid cap, up to the target volume being sought by NYSERDA. While eligibility for solicitations should still be based on individual facility characteristics, Brookfield suggests that solicitations should allow for generator owners to execute contracts that allow for multiple facilities to be aggregated together to contribute to a total bid quantity, provided there is common ownership across the facilities.

CEA suggests that only CLCPA-eligible resources be eligible for the Tier 2 Program and opposes allowing out-of-state resources to participate. Like Brookfield, CEA believes that the program should extend beyond 2025 and that NYSERDA should award more than one-third of baseline resources in each solicitation. CEA further asserts that a program cap is unnecessary given the use of a confidential maximum bid price.

ESFPA contends that biomass and bioenergy electricity generation should be eligible for the Competitive Tier 2 Program. ESFPA also asserts that, because program would last only until 2025, the Tier 2 contracting structure fails to ensure that existing renewable resources would remain in-state to contribute to energy policy targets.

Energy Ottawa supports the proposed eligibility requirements for qualifying baseline renewable resources under the Competitive Tier 2 Program. Energy Ottawa states, however, that the proposed \$200 million funding cap is arbitrary and without merit. It offers as an alternative to controlling program costs and achieving the most cost-effective implementation the use of a confidential maximum bid price informed by the prevailing Tier 1 REC price and periodic review of the Tier 2 Program in terms of efficiency, effectiveness, and cost control measures. Energy Ottawa recommends aligning the Competitive Tier 2 Program with CLCPA targets by administering it through 2030, rather than the series of three-year contract periods proposed by NYSERDA. According to Energy Ottawa, the Competitive Tier 2 Program should mandate NYSERDA to procure a specific number of RECs and require a higher percentage of the available baseline than what was proposed in the Tier 2 Petition. Energy Ottawa advises that REC procurements under the Competitive Tier 2 Program should allow generators that operate portfolio assets to consolidate commonly-owned facilities in single bids.

HQUS recommends that eligibility for a Competitive Tier 2 Program should be established based on the technology requirements specified in the CLCPA with no geographic restrictions outside of the ability to physically deliver energy associated attributes into the New York control area.

Gravity argues that a permanent solution is needed to preserve crucial baseline resources. Gravity proposes that location and deliverability criteria for Tier 2 resources should be consistent with Tier 1 resources, and the eligibility of the environmental value attributes for net metered or distributed resources should be revised to include Tier 2 resources. Gravity argues that a permanent, long-term solution is needed to

preserve crucial baseline resources, and that the short duration of the proposed program would not provide the stability needed to make the large investments to preserve the baseline resources. Gravity argues that out-of-state existing resources should be compensated for the benefits they provide and be eligible for any Tier 2 program that is in place, regardless of when the energy is imported. Gravity recommends that the MW eligibility limit included as part of the existing Maintenance program should be expanded from 10 MW to 30 MW to preserve more of New York's important small baseline generators.

IPPNY supports, as a short-term measure to meet the CLCPA's goals, allowing existing renewable resources within the State to be eligible to participate in the Competitive Tier 2 Program. IPPNY suggests, however, that the competitive program for existing renewable facilities remain in place until an alternative market-based mechanism, such as carbon pricing, is established to value emissions-free electricity and obviate the need for such a Tier 2 program.

The City questions the need for additional funding for existing renewable resources beyond the existing Tier 2 Maintenance program. Similarly, the JU oppose the proposed Competitive Tier 2 Program and urge the Commission to reject it. The JU argues that REC payments from electricity customers to existing renewable resources constitutes an inappropriate shift of risk and cost to customers for the potential benefit of merchant plant owners. The JU expresses concern that the Petition could create bidding competition between NYSEDA and out-of-state entities, generating higher prices for ratepayers necessary to counter market pressure from neighboring states. The JU claims that utility ownership offers a lower-cost business model that would benefit ratepayers by obviating the need for subsidies in the form of continual REC payments.

The JU provides suggested program modifications in the event the Commission adopts the proposed Competitive Tier 2 Program. In particular, the JU states that the Commission should undertake a thorough reassessment of REC procurement methods to examine the potential market benefits of supplemental actions like carbon pricing and utility ownership in reaching ambitious state energy policy goals. The JU also advocates for the adoption of regulatory measures to avoid artificial price increases associated with competitive pressures from participation by out-of-state entities. Finally, the JU recommends that remaining Tier 2 RECs should be assigned pro rata to all LSEs (both energy supply companies and public utilities) after accounting for sales to voluntary programs.

In reply comments, the JU noted its disagreement with Brookfield's recommendation to procure 75-85% of available MWh from eligible facilities in each solicitation for a re-sale process to allow LSEs and voluntary buyers access to RECs at a discount for voluntary programs. Instead, the JU noted its support for the growth of a robust voluntary market for these resources. The JU urges rejection of various other recommendations to expand NYSERDA's proposal to add categories of generation resources.

According to Joule, adoption of NYSERDA's proposal without modification would increase the CCA price for RECs to an extent by which CCAs would be priced out of the renewable market. Joule offers what it considers a complementary process by which NYSERDA purchases 7 TWh of RECs, then offers these RECs at a fixed or capped price to CCAs and ESCOs through a re-bid or open offer. Joule states that this approach would allow CCAs to participate in a manner that would not negatively impact the Tier 2 RECs market proposed in the Tier 2 Petition, allowing for a more rapid growth of the market with less ratepayer burden.

MEGA makes a similar point, asserting that obligating CCAs to purchase Tier 2 RECs in a manner proposed under the Tier 2 Petition would raise costs to the point of deterring communities and businesses from pursuing CCAs as an option. Accordingly, it supports modifications to reduce the cost of Tier 2 RECs.

NHA supports a Competitive Tier 2 Program on the grounds that it should incent these generators to keep their resources in-state and part of the renewable baseline. NHA asserts that NYSEERDA should target 75-85% of the available MWs from eligible baseline renewable resources, adding that any bid cap for Tier 2 baseline resources should take into account Tier 1 REC prices or the opportunity costs placed on sellers by REC markets in neighboring jurisdictions. NHA recommends expanding the Tier 2 program through 2030 to allow for longer term investment decisions, and further suggests flexibility for resources owning multiple facilities to be aggregated.

In its comments, ReEnergy states that the proposed structure of Tier 2 contracting does not go far enough to ensure that existing renewable resources would remain in existence or continue providing their energy in the state. ReEnergy also asserts that the program term should run at least through 2030 to be consistent with the 70 by 30 Target. ReEnergy recommends that NYSEERDA procure RECs in an open and transparent manner to ensure that potential program participants can compare program benefits to those offered by other states. ReEnergy adds that a three-year maximum volume procurement with a hidden artificial price ceiling is not an open and transparent mechanism. ReEnergy recommends allowing all types of existing renewables to continue serving the State.

Valcour supports a Competitive Tier 2 Program and argues that the competitive and transparent solicitations would increase the amount of existing renewable energy that would

count against the 70 by 30 Target. Valcour recommends, like other commenters, that the contract term run at least through 2030 to coincide with the 70 by 30 Target and asserts that the \$200 million proposed program cap is insufficient to prevent Tier 2 resources from selling their energy and associated environmental attributes to more lucrative markets.

For its part, MI noted its opposition to the Tier 2 Program as proposed in the petition on the basis that renewable generators that entered into legacy RPS contracts should not be rewarded with new Tier 2 funding. MI points out that there does not appear to be a need for proposed Tier 2 Program given the existence of the Tier 2 Maintenance program. MI expresses concern about the expansion of subsidies paid to existing renewable generators and the authorization of \$200 million in incremental collections to fund the Competitive Tier 2 Program, which it asserts would result in further financial strain on captive customers. For these reasons, MI urges the Commission to reject the Tier 2 Petition or, at minimum, limit its funding source to existing sources of collected, uncommitted funds. Nucor takes a similar position, stating its opposition to the proposed Tier 2 Program and its support for continuation of the current maintenance program.

In considering these comments, the Commission recognizes that there is significant interest in the Tier 2 Petition and that existing renewable energy resources will need to play an important role in meeting the 70 by 30 Target, as well as remaining in service far beyond 2030. When it approved the CES framework, the Commission did not have clear evidence that baseline resources would sell their energy into neighboring states to such an extent as to impact achievement of the CES goals. Indeed, in accordance with the CES Framework Order, the Commission has monitored the issue of energy exports and can

report that several factors have changed since issuance of that order in 2016. For example, low energy prices have compelled existing renewable resources to seek financial support in other markets. According to data collected in NYGATS, exports of baseline renewable generation have increased from 2016 to 2019 by approximately 50 percent.⁴⁴ Given that numerous RPS contracts will be expiring in the near term, the Commission expects this trend to continue, potentially putting New York at risk of not reaching the 70 by 30 Target.⁴⁵

As noted, a majority of the comments expressed support for the Competitive Tier 2 Program. To the extent some commenters oppose the Tier 2 petition on the grounds that compensating existing resources would shift market risk to ratepayers, the Commission finds that the competitive nature of the Tier 2 solicitations coupled with the \$200 million price cap, as proposed by NYSERDA, presents a cost-effective strategy to retain existing renewable resources. The primary policy underlying whether to compensate existing resources pursuant to a competitive program relates to the reality that the environmental attributes associated with energy produced by renewable energy facilities are a marketable commodity that facilities may sell in other states. Thus, Commission rules related to existing facilities must adjust to this market reality by preserving the ability to count energy from existing facilities to the greatest extent practicable toward the 70 by 30 Target and beyond. For this reason, we agree with the basic

⁴⁴ According to data reported from the NYGATS Administrative Report, existing renewable exports increased from 654,331 MWhs in 2016 to 1,277,555 MWhs in 2019.

⁴⁵ It is important to note that several of the facilities with expiring RPS contracts are renewable technologies that are no longer eligible under the CLCPA and will not be counted towards the State's energy goals.

premise underlying the petition; namely, that a competitive RECs program is needed to compensate existing resources for their environmental attributes. As the record shows, absent an appropriate compensation mechanism, there remains a high risk that existing resources located in New York will sell their energy and associated environmental attributes in neighboring states.

The Commission also agrees with the short-term nature of the Tier 2 program proposed in the petition. While we acknowledge the concerns raised by ACE NY, CEA, Brookfield, and Energy Ottawa, who each assert that the three-year contract term and five-year duration of the program is unnecessarily short, the Commission finds that it is an appropriate stop gap measure that will serve as a bridge for struggling existing renewable resources while further consideration is given to establishing more appropriate market-based solutions. Accordingly, the Commission adopts the three-year contract term proposed in the Tier 2 petition and declines to extend the duration of the proposed Competitive Tier 2 Program. The Commission also notes that the short-term nature of the Tier 2 contracts and program will provide the Commission with the necessary data to determine if the basic approach is workable, and should be expanded into the future.⁴⁶ To ensure the Commission is fully apprised as to how the competitive solicitations are proceeding and to inform potential future actions, the Commission directs NYSERDA to file annual updates regarding the amount of resources deemed eligible, the level of responses to the solicitations, and the number of RECs procured under Competitive Tier 2 contracts, as well as any insights NYSERDA has gleaned from administering the

⁴⁶ Providing Tier 2 support for longer periods, as proposed by some commenters, may also hamper the development of the voluntary market, the expansion of which is helpful for long term support of these resources.

program. NYSERDA shall file any of this information under seal to the extent of protecting materials deemed confidential. These updates shall be included as part of the annual CES Progress Report.

Next, the Commission addresses the aspect of NYSERDA's petition that proposes to limit the overall participation in the program to an unspecified "majority" of otherwise eligible generation and for NYSERDA to use a confidential maximum bid price above which bids would be rejected. As NYSERDA notes, limiting the Tier 2 Program to a majority of generation from eligible resources would promote competition and incentivize resources to submit reasonable bids. Unlike the potential resources that may participate in Tier 1, the capacity and potential generation from eligible existing resources is known by both NYSERDA and the renewable energy industry. Thus, while competition is a natural feature of Tier 1, the premise underlying NYSERDA's petition is that competition must be created in the context of Tier 2 to incentivize low bids. Moreover, as NYSERDA notes, this partial procurement approach will would help enable and grow the voluntary RECs market. The Commission finds this particular program element to be compelling and thus authorizes NYSERDA to limit the program to a majority of overall eligible generation.

The Commission also provides NYSERDA with discretion to determine the specific level of generation that may participate in the overall program and to set a confidential bid price above which bids would be rejected. Requiring NYSERDA to solicit a majority of generation over the duration of the program, absent mandating a specific level of generation per solicitation, provides an additional feature of competition, as does authorizing NYSERDA to set a confidential maximum bid price. The Commission finds that these program features will

provide further incentives for otherwise eligible developers to bid in low RECs prices.

As noted above, several commenters recommend expanding the number of MWs solicited in each of the three NYSERDA solicitation. The Commission rejects an approach that would guarantee that all Tier 2-eligible resources are compensated over the duration of the program because such an approach would deter competition, which the Commission has found to be a key program element. However, we note that the current Maintenance Tier contracts will continue to remain available for existing facilities with a demonstrated financial hardship, consistent with prior Commission orders.

As for those comments that take issue with NYSERDA's program cap of \$200 million and request to impose a confidential maximum bid price, the Commission finds that creation of these program features will further discipline market participants to submit bids that accurately represent the value of their environmental attributes. For example, run-of-river hydroelectric generators have sold into the NYISO's energy market since its creation, without being compensated for their environmental attributes. The need for a Competitive Tier 2 Program is primarily based on ensuring that baseline renewable energy resources sell their energy in-state. The Commission finds that the proposed \$200 million cap, as well as the proposal to impose a confidential maximum bid price, appropriately balances the need to incentivize these resources to sell their energy in New York, while limiting ratepayers' exposure.⁴⁷

⁴⁷ For these same reasons, As noted by Joule in its comments, setting a program budget will lessen the impact to CCAs, a concern raised by Joule.

The Commission also notes that a maximum acceptable bid price was a founding principle underlying the Renewable Portfolio Standard. In an Order, dated August 21, 2009, the Commission explained:

We want all developers to aggressively bid their best price for supplying renewable energy attributes. NYSERDA is operating under a finite budget and therefore should establish a maximum price it may accept based on a careful analysis of expected development costs and market prices tempered with budget realities. The fact that NYSERDA establishes a maximum price should not interfere with bidders offering their best price and adds an element of price discipline to the solicitation, for the benefit of ratepayers. By disclosing the fact that a maximum price will be set, the bidders are better informed of how their bids will be received and that added information should assist them as they plan their bidding strategy. This approach has been used in each of the last three solicitations and we hear no compelling reason not to include it in this solicitation. Therefore, NYSERDA will set an undisclosed price above which contracts will not be awarded.⁴⁸

The Commission finds the reasoning of the 2009 Order to be of equal force today.

The Commission next addresses the types of RECs that should be procured under Tier 2. The Commission recognizes that NYSERDA has employed both Fixed-price and Indexed RECs in its recent solicitations for offshore wind and onshore renewable resources. As the Commission noted in its January 16, 2020 Order, 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, which is itself sensitive to

⁴⁸ Case 03-E-0188, Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard, Order Authorizing Additional Main Tier Solicitation and Setting Solicitation Guidelines (issued August 21, 2009), pp. 5-6.

the amount of risk inherent in the development.⁴⁹ The Commission determined that the use of Indexed RECs can have the effect of reducing that risk and thus lowering REC bid prices. Unlike resources that have participated in recent Tier 1 and offshore wind solicitations, facilities expected to participate in the Competitive Tier 2 Program long ago completed construction and thus do not face the same financing risk as new renewable generation. Moreover, given the short-term nature of the Tier 2 Program, it would simply be easier for NYSERDA to apply a fixed-price RECs approach to this program. For these reasons, the Commission directs NYSERDA to offer Competitive Tier 2 REC contracts using Fixed-price RECs.

With respect to the issue of eligibility, the Commission agrees with NYSERDA that it is bound by the definition of "renewable energy systems" under PSL §66-p(1)(b). The Commission has already addressed the plain language of the statute earlier in this Order. The Commission rejects as inconsistent with PSL §66-p(1)(b) those comments recommending that the Tier 2 Program include all technologies deemed renewable in the Commission's initial set of CES orders. Given that only "renewable energy systems" count against the 70 by 30 Target, it would be inconsistent with the CLCPA to expand Tier 2 beyond those resources. Accordingly, eligible competitive Tier 2 resources are limited to existing non-state-owned run-of-river hydropower and existing wind generators located within the State and that have entered commercial operation prior to January 1, 2015. Additionally, the Commission adopts the recommendation that only the generation from eligible facilities not already under contract with NYSERDA be eligible for Competitive Tier 2 compensation.

⁴⁹ Case 15-E-0302, Order Modifying Tier 1 Renewable Procurements, (issued January 16, 2020).

The Commission rejects requests to expand eligibility to resources that otherwise meet the definition of "renewable energy systems" or already have a mechanism that values environmental attributes. For example, Gravity suggests that net metered or distributed resources be allowed to participate under the Competitive Tier 2 Program. However, these resources already receive compensation under VDER, and have not made the case for alternative or additional compensation under Tier 2. For similar reasons, the Commission rejects the JU's argument that utility legacy purchase power agreements (PPAs), where the utility owns the environmental attribute, should be eligible for Tier 2 on the grounds that a generator operating pursuant a utility PPA already receives support. Moreover, compensating utilities for environmental attributes that they are already procuring pursuant to existing PPAs would not advance the State's clean energy goals.⁵⁰

The Commission also rejects the request made by some commenters to allow generators to execute contracts that allow for bids that include the aggregation of portfolio-wide output across several projects provided there is common ownership across the aggregated facilities. Such a policy could allow larger developers to monopolize solicitations to the detriment of smaller facilities and result in less competitive solicitations.

Turning to funding of the proposed Competitive Tier 2 Program, the Commission finds reasonable NYSERDA's request to fund the Tier 2 Program through a new Tier 2 REC obligation imposed on LSEs given its consistency with other CES obligations. Accordingly, NYSERDA and Staff shall annually

⁵⁰ The Commission finds the request made by the JU to explore the ability of utility ownership of renewable facilities to be beyond the scope of the Tier 2 Petition.

calculate a uniform per MWh LSE Tier 2 rate to be applied to each LSE's actual wholesale load to calculate each LSE's Tier 2 Monthly Obligation Payments, as described in the Tier 2 Petition. An LSE's Tier 2 Monthly Obligation Payment shall be calculated by multiplying the LSE Tier 2 Rate by the number of MWh the LSE served, using the NYISO Version 1 load data, and Load Modifier Rate. Once NYSERDA determines the LSE's Tier 2 Monthly Obligation Payment and issues an invoice, LSE's shall submit their payment to NYSERDA within 15 days. NYSERDA shall also implement a reconciliation process at the end of each compliance year in a manner similar to the process approved by the Commission for the zero-emissions credit program and described in the Tier 2 petition. Within 90 days of the issuance of this order, NYSERDA shall provide each effected LSE with the standard Agreement for the Sale of Tier 2 RECs provided in the Tier 2 petition. All LSEs are directed to provide NYSERDA with an executed copy of the standard Agreement for the Sale of Tier 2 RECs as soon as possible, but in no event later than 30 days after receipt of the standard agreement.

The Tier 2 Petition proposes a five-year budget to support NYSERDA's administrative costs under the Tier 2 Program, funded through uncommitted SBC, EEPS, and/or RPS funds. By contrast, the White Paper suggested funding Tier 2 administration in a manner consistent with other programs proposed in the White Paper; namely, through an adder mechanism beginning in 2021. As discussed more fully in Section J below, the Commission adopts the White Paper proposal to collect NYSERDA's administrative costs through an administrative adder applied to the uniform Tier 2 rate and not from the use of uncommitted funds. NYSERDA shall post on its website the Tier 2 rate plus any Commission-approved administrative adder for the applicable compliance period. Additionally, NYSERDA should

separately track and incorporate relevant elements of the program administration costs into existing schedules for CES reports, including quarterly administrative reports, the annual CES Financial Status report, the annual RES Procurement Performance Report and the annual CES Progress Report as defined in the Final Phase 3 Implementation Plan.⁵¹

Finally, the Commission addresses matters related to Tier 2 that arose in the context of the White Paper. For example, the White Paper sought comments on whether NYSERDA should also be authorized to re-sell Tier 2 RECs to voluntary purchasers, including ESCOs and CCAs. Several commenters, including City of Albany, NHA and Sustainable Westchester, support the re-selling of Tier 2 RECs to the voluntary market at a discount on the grounds that it would help protect initiatives such as CCAs through access to lower price RECs. LIPA agrees that NYSERDA should be authorized to re-sell Tier 2 RECs on a voluntary basis so long as it does not increase costs to or eliminate any opportunity to reduce costs from LSEs that are required or expected to participate in NYSERDA's proposed Tier 2 RECs program. REBNY also supports allowing NYSERDA to re-sell Tier 2 RECs to voluntary purchasers, including building owners.

In contrast to those that support the re-sale of Tier 2 RECs in the voluntary market, Environmental Entities argue that such a policy should only be authorized if a high percentage of the Tier 2 pool is procured each year. For its part, Brookfield argues that allowing NYSERDA to re-sell Tier 2 RECs under such a design would result in unprocured renewable resources competing with NYSERDA within the voluntary REC market.

⁵¹ Case 15-E-0302, supra, Final Phase 3 Implementation Plan (filed January 22, 2019).

The Commission has long supported the sale of RECs in a voluntary market.⁵² This reasoning applies with even more force now because of the stated desire of CCAs and ESCOs to procure RECs to support renewable product offerings to their customers. For these reasons, the proposal to allow NYSERDA to re-sell Tier 2 RECs that it purchases from generators is adopted. As noted, the Commission finds that this element of the program will keep downward pressure on Tier 2 REC prices and allow CCAs to take advantage of NYSERDA Tier 2 REC prices. NYSERDA shall sell Tier 2 RECs at a price floor equal to its procurement costs, plus the Commission-approved administrative adder. However, more information regarding the process to be undertaken by NYSERDA when re-selling Tier 2 RECs is necessary before such sales can occur. The Commission thus directs NYSERDA to file, on or before May 1, 2021, an implementation plan for stakeholder comment and ultimate Commission approval that will include a description of the re-sale process, timing, and its interaction with the LSE obligations and reconciliation process described above. Only after approval of the implementation plan can NYSERDA begin re-selling Tier 2 RECs.

Further, the Commission directs NYSERDA to issue the first Competitive Tier 2 solicitation within 120 days of the effective date of this Order. The Commission acknowledges that timing of this Order will require NYSERDA to modify the process for the first compliance year of the Competitive Tier 2 Program, which is intended to run on a calendar year basis. As a result, NYSERDA will need to adjust the timing of its collection and

⁵² See Case 03-E-0188, Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard, Order Regarding Retail Renewable Portfolio Standard (issued September 24, 2004) (underscoring the importance of stimulating voluntary/competitive renewable energy sales and purchases to promote sustainable renewable energy activities).

payment obligations to preserve the calendar year compliance period while allowing all parties to meet their Tier 2 obligations. Therefore, the Commission adopts the following process for the first compliance year of the Competitive Tier 2 Program. RECs associated with energy generated by selected Tier 2 projects will be eligible for Tier 2 compensation beginning on January 1, 2021, and through December of 2021. However, because LSE obligations will not begin until July 2021, as discussed below, NYSERDA's payment schedule must be modified.

Specifically, the generator agreements shall be designed to provide that invoicing for Tier 2 RECs associated with energy generated during the first six months of 2021 may be submitted no sooner than September 2021 for payment thereafter in accordance with NYSERDA's prompt payment policy. Invoices for Tier 2 RECs associated with energy generated during the last six months of 2021 may be submitted no sooner than December 2021 for payment thereafter, again in accordance with NYSERDA's prompt payment policy.

Regarding Competitive Tier 2 LSE obligations, because the uniform per MWh LSE Tier 2 rate cannot be calculated until after the solicitation process, payments by LSEs to NYSERDA will begin in July 2021. The uniform per MWh LSE Tier 2 rate shall be calculated and published no later than May 1, 2021, to provide LSEs with at least 2 months' notice before the commencement of payments to NYSERDA. For 2021 only, NYSERDA shall collect the full 2021 calendar year REC costs over the final six months of 2021, beginning in July 2021. Compliance year 2022 and subsequent compliance years will then operate, for both collections and payments, on a standard calendar year basis.

The White Paper also sought comments regarding NYPA's participation under the proposed Competitive Tier 2 Program; in

particular, whether NYPA should be permitted to satisfy its own Tier 2 obligation through self-supply, acquisition of RECs or, alternatively, through another compliance mechanism. This issue came to light in NYPA's initial comments submitted in response to the Tier 2 Petition, where NYPA argued that the exclusion of NYPA baseline hydroelectric generation from the Competitive Tier 2 Program could lead to reduced generation and a corresponding increase in the amount of new renewable generation necessary to meet State policy objectives. For these reasons, NYPA urged the Commission to define generation from NYPA's existing hydroelectric facilities as Tier 2 eligible. At the same time, NYPA asserted that it would not seek to participate in NYSERDA's proposed initial three-year Tier 2 solicitations and would work with its customers on retiring its Tier 2 RECs. NYPA proposes to use the Tier 2 designation to appropriately value the environmental attributes from its hydropower facilities so that they are equivalent to the value of the attributes from other baseline renewable resources. However, NYPA states that doing so would give it the flexibility to participate in subsequent Tier 2 procurements should its participation be warranted by future market conditions.

NYPA states that, as an LSE, it intends to voluntarily comply with the proposed Tier 2 targets and self-supply Tier 2 RECs to fulfill its customers' Tier 2 obligation. Further, NYPA claims they will retain and retire sufficient renewable attributes from its hydroelectric generation assets to meet the Tier 2 Program targets in accordance with its customers' share of statewide load. It adds that precluding NYPA from self-supplying Tier 2 RECs to its customers could result in additional costs imposed on NYPA's economic development customers, contrary to the intent of the programs

In its reply comments, NYPA explains that ineligibility for the proposed Competitive Tier 2 Program could lead to NYPA hydroelectric units not being selected to run in the NYISO, eroding the existing baseline of renewable generation that the proposed Competitive Tier 2 Program is designed to preserve, thereby increasing ratepayer costs by requiring the procurement of more Tier 1 RECs from new, more expensive resources. NYPA reiterates that it would not seek to participate in any subsequent Tier 2 solicitations unless the Commission and NYSERDA first determine that such participation would be in the best interest of New York ratepayers. Until such time, NYPA's argues its participation in the proposed Competitive Tier 2 Program would be limited to developing new voluntary green power products for its customers and self-supplying the Tier 2 RECs necessary to voluntarily meet its Tier 2 obligation as an LSE. NYPA maintains that the JU's argument that NYPA should not be permitted to participate in the CES Tier 2 Program because it doesn't pay into the state's clean energy programs is irrelevant and misses the objective of the Tier 2 Program.

Joule states that the NYPA proposal to qualify its resources as Tier 2 eligible would provide further growth opportunity for the industry. However, Nucor argues that expanding the proposed Competitive Tier 2 to include existing NYPA facilities is unwarranted. Similarly, CEA argues that NYPA's request to participate in the Tier 2 Program appears premature and suggests extending the Maintenance Tier program to NYPA facilities that are financially in need. CEA expresses concern about the cost to jurisdictional ratepayers if the Commission adopts Tier 2 eligibility for NYPA. CEA recommends that any decision by the Commission should address the issue of cost to ratepayers.

The JU opposes NYPA's participation in these solicitations. The JU argues that NYPA, as a governmental authority, shares responsibility for meeting the State's clean energy goals and its hydropower units face no risk of retirement and/or leakage through sales of attributes to out-of-state markets. The JU sees no public interest reason to allow NYPA's hydropower resources to participate in the Tier 2 solicitations or self-supply to avoid paying for its fair share of future Tier 2 obligations. It suggests that, if the Commission permits NYPA to participate in the Tier 2 solicitations, fairness considerations dictate that the Commission recognize that NYPA resources be used to reduce future compliance requirements for all LSEs.

In reply comments, the JU argues that the NYSERDA Tier 2 Program's intent was to support existing renewables that can sell RECs out of state. However, the JU points out that NYPA should not be allowed to sell RECs out of state as a government entity and shares responsibly to support the goals of the CLCPA. The JU argues that NYPA has not funded many of the State's clean energy programs, so it should not be permitted to participate in the CES Tier 2 Program paid for by New York utility customers.

LIPA argues that should NYPA's baseline generation be deemed Tier 2 eligible. LIPA also proposes that Tier 2 eligible resources be expanded to broadly include all renewable energy systems, most notably solar. LIPA notes that it should be equally deserving of the opportunity to participate in this program.

MI asserts that NYPA customers already fund its voluntary renewables obligations through their contracts for NYPA power and therefore should not be required to also fund a Competitive Tier 2 Program. MI states that despite funding approximately 15 years of mandated, customer-funded subsidies of

renewable generation facilities, NYPA still has the resources to be the largest owner/operator of renewable generation in the State. If its facilities are not eligible for the Competitive Tier 2 Program, MI continues, NYPA could be placed at a competitive disadvantage relative to those generators that do qualify for Tier 2, and any economic benefits to customers associated with low-cost NYPA hydropower could be eroded.

NHA underscores NYSERDA's estimates that NYPA's hydropower facilities account for approximately 55 percent of baseline renewable resources and warns that, by including NYPA's hydropower resources in the baseline while restricting its participation in the CES, the State is assuming the hydropower fleet will remain economical to meet ambitious environmental goals. It argues that NYPA's fleet of hydroelectric resources are vital to New York State's CLCPA goals and that its resources should be treated on equal footing to other Tier 2 baseline resources.

NYMPA opines that NYPA's hydroelectric fleet should be eligible to produce Tier 2 RECs to be used for compliance with a Tier 2 NYPA obligation and supports NYPA's proposal, if the Tier 2 RECs generated by NYPA can be used for compliance by NYMPA members. It explains that if its members were required to pay for Tier 2 RECs like other LSEs, its members would be supporting not only NYPA resources, but also a load ratio share of all other Tier 2 eligible resources in the state.

NYAPP states that the CES should not preclude NYPA from receiving RECs, and that such RECs should be specifically encouraged and authorized consistent with NYPA's hydropower assets. In turn, NYAPP concludes that the Commission-jurisdictional NYAPP members should be permitted to utilize environmental attributes associated with the hydropower they purchase to meet their REC obligations.

Sustainable Westchester agrees that NYPA resources should be eligible under Tier 2. Citing the recent authorization for NYPA to procure electricity for CCAs, it suggests that NYPA could commit to make Tier 2 RECs available to CCAs to further the development of this shared purchasing model.

At this time, the Commission declines to expand the scope of eligible resources to include State-owned hydroelectric facilities given that NYPA's participation could create an unlevel playing field and adversely impact the competitive nature of the program. However, in recognition of its ownership of existing baseline renewable resources, the Commission does not believe NYPA should be obligated to support other existing baseline renewable resources under the Competitive Tier 2 Program.

The Commission acknowledges that there may be merit to NYPA's request to offer its customers the value of its environmental attributes through RECs sold in the voluntary market. NYPA's hydroelectric generation has environmental attributes that have value, and as such the Commission is open to considering how to best allow that value to be recognized through the voluntary markets. As a first step, we invite NYPA to file a plan detailing how it could supply RECs to its customers without material impact to the current voluntary REC market. To facilitate NYPA's interest in making voluntary sales, the Commission directs Staff and NYSERDA to work in consultation with NYPA to develop a workable construct for establishing and tracking NYPA-created RECs in NYGATs.

NYPA's baseline hydroelectric facilities have long constituted the backbone of the State's energy system and will play an even more important role moving the State toward a zero-emission energy supply. It goes without stating that the economics of these facilities remain of paramount importance to

meeting the CLCPA's aggressive energy Targets. The Commission also acknowledges NYPA's concern regarding the potential for future economic curtailment of its hydroelectric assets, something that we agree must be guarded against.

Unquestionably, the energy baseline associated with NYPA's assets must be maintained at current levels and even increased if practicable. Accordingly, the Commission also recommends that, in consultation with Staff and NYSERDA, NYPA solicit a third-party, independent analysis regarding the intermarket effects that it believes may result in the future curtailment of its facilities and to provide that analysis to the Commission for evaluation. The Commission believes this is another necessary step to understanding whether there is a need for it to play a greater role in NYPA being compensated for the environmental attributes associated with the hydroelectricity generated by its facilities.

F. Tier 4

1. Need for Tier 4

In the White Paper, NYSERDA and Staff explained that the need to reduce New York City's reliance on fossil fuels is a "central challenge" to achieving the CLCPA's 70 by 30 Target, and described the need for a new Tier 4 of the CES that would aim at increasing the penetration of renewable energy into New York City (Zone J) .⁵³ The White Paper referenced NYISO's "Tale of Two Grids" analysis, which shows that the upstate region of the State, defined as NYISO load zones A - E, is supplied by 88% zero-emission resources, but accounts for only one third of statewide load. By contrast, the downstate region (zones F- K)

⁵³ White Paper, p. 45.

accounts for roughly two thirds of statewide load but is supplied by 69% fossil fuel-fired generation.⁵⁴

The White Paper further observed that, even within the downstate region, New York City is particularly dependent on fossil fuel-fired generation. New York City consumed 52,003 GWh of electricity in 2019, roughly a third of the statewide total of 155,832 GWh.⁵⁵ During that year, nearly all of the roughly 22,500 GWh of electricity generated within New York City was from fossil fuel-fired generation.⁵⁶ The White Paper concluded that, without displacing a substantial portion of the fossil fuel-fired generation that New York City currently relies upon, the statewide 70 by 30 Target would be difficult to achieve.

The White Paper next considered whether existing programs within the CES could be relied upon to increase the penetration of renewable energy into New York City on the necessary scale and timeline. The White Paper noted that the Tier 1 program for new land-based renewable generation has, to date, principally spurred upstate development due to factors such as the availability of adequate locations. The White Paper concluded that, absent new transmission capacity, the addition of new upstate renewable developments will fail on its own to increase the penetration of renewable energy consumed in New York City to a level that enables statewide compliance with the 70 by 30 Target. The White Paper observed that, while the State should expect rapid growth in the deployment of distributed solar in New York City supported by the NY-Sun program, distributed solar will not have the necessary scale to solve this issue on its own.

⁵⁴ NYISO, Power Trends 2020, p. 9.

⁵⁵ NYISO, 2020 Load and Capacity Data: Gold Book, p. 19 ("Gold Book").

⁵⁶ Id., p. 94.

The White Paper also noted that the Offshore Wind Standard has the greatest potential to increase the penetration of renewable energy in New York City. The White Paper observed that, as the State approaches the CLCPA's 9 GW offshore wind target, the amount of offshore wind delivered into New York City will continue to increase. But the White Paper cautioned against exclusive reliance on the Offshore Wind Standard, noting that it is not known how much offshore wind will be delivered to Zone J as opposed to other zones, and that resource diversity concerns may limit the extent to which Zone J can rely primarily on offshore wind to achieve the CLCPA requirements.

Numerous commenters support the need for a new tier of the CES directed at increasing the penetration of renewable energy in Zone J. For instance, the City states that Tier 4 is needed to "reduce downstate, and in particular, New York City's reliance on aging fossil fuel-fired generation; solve the 'tale of the two grids'; supplement offshore wind production; enhance fuel diversity, grid reliability and resiliency; and add renewable generation to satisfy local requirements, including the potential for alignment with the City of New York's Local Law 97 of 2019."⁵⁷ No commenters dispute the premise that increasing the penetration of renewable energy in Zone J would be necessary for meeting CLCPA targets. However, the JU notes that the "incentive for renewable generators to site their projects is already transparently available within the NYISO's energy, capacity, and ancillary services market pricing for a particular zonal location."⁵⁸

The Commission agrees, for the reasons stated in the White Paper, that there is a need for a new tier of the CES

⁵⁷ The City Comments, p. 3.

⁵⁸ JU Comments, p. 7.

aimed directly at reducing the reliance on fossil fuel-fired generation in New York City. Transmission constraints and a lack of adequate sites have made New York City uniquely reliant on fossil fuel-fired generation. Among existing CES programs, only the Offshore Wind Standard holds the promise of reducing New York City's reliance on fossil-fuel fired generation on the necessary scale. However, the Commission believes that it would be imprudent, at this time, to rely exclusively on the Offshore Wind Standard to achieve this purpose. Resource diversity concerns may, in time, counsel against exclusive reliance on offshore wind to reduce the use of fossil fuel-fired generation in Zone J. The Commission concludes, therefore, that a separate tier, independent of both Tier 1 and the Offshore Wind Standard, will be necessary to comply with the CLCPA and should be pursued through a NYSERDA solicitation.

Suggestions that the locational wholesale price signals for energy, capacity and ancillary services already provide incentives to deliver renewable energy to Zone J misstate the purpose of Tier 4. Through Tier 4, the State is not procuring energy or capacity. Rather, the State is procuring the unbundled environmental attributes associated with renewable generation delivered into Zone J. These environmental attributes include the avoidance of GHG emissions, as well as the avoidance of local pollutants such as NOx, Sox, and fine particulate matter. These environmental attributes are only partially reflected in the NYISO's energy and capacity market prices at a statewide level. Therefore, the Commission rejects the suggestion that it would be improper to associate a locational value to the environmental attributes of renewable energy based on its delivery to locations within the State that relies most heavily on emitting sources.

2. Tier 4 REC Prices and Other Material Terms

The White Paper proposed that the Commission authorize NYSERDA to conduct a solicitation for Tier 4 RECs and to enter into any resulting agreements at its discretion and without further process before the Commission. To ensure the reasonableness of Tier 4 REC prices, the White Paper proposed benchmarking Tier 4 prices to Tier 1 prices and sought comment on the best methodology for doing so.

Several commenters supported benchmarking Tier 4 prices to Tier 1 prices. For example, MI commented that a cap on the Tier 4 REC price at a benchmark of Tier 1 REC prices would mitigate the potential subsidization by upstate customers of downstate renewable resources generated in the Tier 4 program. Other commenters rejected the notion that Tier 4 prices should be linked to Tier 1 prices. These commenters, including TDI, HQUS, Aligned Developers, Boralex, EnergyRe and Invenergy, argued that capping Tier 4 prices at Tier 1 levels would fail to capture the added value provided by delivering renewable energy into Zone J and the added cost of new transmission.

With respect to process, numerous commenters suggested that the Commission take additional steps before finalizing a Tier 4 program. For example, ACE NY, Clean Energy Advocates, Ravenswood, NY Renews and NYOWA all urged the Commission to hold a technical conference on Tier 4, while other commenters such as the JU, the Named Utilities and Avangrid urged to the Commission to put the Tier 4 proposal through additional review and comment.

The Commission concludes that it would be inadvisable to set a pre-determined cap on Tier 4 REC prices at this time. Instead, to ensure that Tier 4 REC prices are reasonable in relation to the value of the environmental attributes and other

benefits provided, including system and public health benefits, the Commission will require NYSERDA and DPS Staff to file any agreement for the procurement of Tier 4 RECs with the Commission for approval. Those agreements will be made available for public inspection and comment.⁵⁹ The Commission will decide whether to approve or deny any such agreement on the basis of whether it advances the public interest. NYSERDA and Staff shall, as part of any filing for Commission approval of any agreement for the procurement of Tier 4 RECs, include the anticipated bill impacts that would result from the proposed agreement. The Commission's analysis of whether the procurement of Tier 4 RECs from a particular project or portfolio of projects advances the public interest will incorporate principles articulated in the Commission's BCA Framework Order⁶⁰ and include, but need not be limited to, considerations of: (i) whether the agreement is a cost-effective means of progressing toward the CLCPA's 2030 and 2040 Targets in light of the unique challenges of reducing fossil fuel use in Zone J; (ii) the extent to which the selected project or projects will enable reduced reliance on fossil-fuel fired generation located in Zone J; (iii) the degree to which the selected project or projects complement the foreseeable deployment of offshore wind within Zone J; (iv) impacts to disadvantaged communities; (v) project viability; and (vi) economic benefits to the State.

⁵⁹ Public versions of such agreements will redact critical electric infrastructure information and other sensitive information that is not relevant to the public interest determination.

⁶⁰ Case 14-M-0101, Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision, Order Establishing the Benefit Cost Analysis Framework (issued January 21, 2016), Appx. C.

For other tiers within the CES, the Commission has delegated authority to NYSERDA to reach definitive agreements for the procurement of RECs without further approval. The Commission has made those delegations based on the well-founded expectation that the CES solicitations would engender sufficient competition to ensure the reasonableness of resulting REC prices. But Tier 4 remains an untested concept and so warrants a different approach. Most importantly, it is unclear at this time whether the Tier 4 solicitation directed in this order will foster a sufficient quantity of comparative bids to provide inherent assurance that the prices reflected in winning bids are just and reasonable. Therefore, Commission review of final and approval of agreements is necessary.

The White Paper proposed to address this issue through the imposition of a price cap benchmarked to Tier 1 prices. The Commission declines to accept that aspect of the proposal. The value provided by a Tier 4 REC is not necessarily equivalent to the value provided by a Tier 1 REC and should not be capped at a Tier 1 price. Moreover, decarbonizing Zone J is an unavoidable necessity of complying with the CLCPA's 2030 and 2040 Targets. Thus, the relevant question is not whether the price of a Tier 4 REC exceeds the price of a Tier 1 REC. Rather, the question is whether a project selected under Tier 4 can reasonably be judged to be part of the portfolio of resources that will achieve the CLCPA Targets at the lowest cost and highest value to the State. This judgment will best be made by the Commission with an agreement before it to evaluate and such agreement should not be artificially limited by a price cap tied to another program within the CES.

The Commission also believes that the stakeholders who have engaged in this proceeding will benefit from an opportunity to comment on the merits of an actual Tier 4 project, should any

be selected by NYSERDA, before it is ruled upon by the Commission. Several stakeholders commented that the Commission should slow the Tier 4 policy development process down by requiring additional written submissions or a technical conference. Given the novelty of Tier 4, these stakeholders were understandably concerned about the decision to proceed with a new tier of the CES without knowing what its market and environmental impacts would be. But, in light of the decision to make an independent determination, after notice and comment, on whether to approve any Tier 4 agreements filed by NYSERDA and Staff, the Commission believes that it is unnecessary to convene a technical conference or to seek additional comment on Tier 4 at this time.

3. Resource Eligibility

Stating that the challenge of decarbonizing New York City's electric system warrants consideration of the broadest possible scope of resources, the White Paper proposed that any resource meeting the CLCPA definition of "renewable energy systems" should be eligible to participate in Tier 4 solicitations, with a few clarifications. First, the White Paper proposed a vintage requirement for all non-hydropower resources based on the date of this Order. Second, the White Paper proposed that hydropower resources should not be subject to size or vintage limitations, but that energy generated from new impoundments not already under construction as of the date of the White Paper should be excluded from Tier 4 eligibility. Third, the White Paper proposed that offshore wind should be procured through a separate process, and thus that offshore wind resources should be ineligible to compete in Tier 4 solicitations.

While many commenters accepted the need for a vintage requirement on non-hydropower resources, one commenter, Sierra

Club et al., questioned whether a vintage requirement was necessary. Sierra Club et al. observed that if the purpose of Tier 4 is to bring renewable energy downstate, the new tier should be open to any renewable resources that newly delivers into Zone J without regard to vintage.

Generally, commenters supported the restriction on hydropower from new impoundments, with the exception of the Consumer Energy Alliance, which commented that Tier 4 should be open to all "renewable energy systems" under the CLCPA. Other commenters, such as Clean Energy Advocates and Ravenswood, suggested the restriction for energy from new impoundments did not go far enough and that suppliers could meet their Tier 4 obligations from existing impoundments while developing new impoundments to meet other commitments.

Several commenters, including Boralex, NYOWA, ASOW argued that offshore wind should be eligible for procurement under Tier 4. Other commenters, including NYPA, the JU, and the Named Utilities, urged that behind-the-meter resources should also qualify to bid into Tier 4 solicitations.

The Commission agrees with the White Paper proposal that, subject to the few clarifications discussed below, Tier 4 should be open to all "renewable energy systems," including renewable energy systems paired with storage. One such clarification is the vintage of non-hydropower resources. Non-hydropower renewables must achieve commercial operation after the date of this Order to be eligible for Tier 4. The purpose of the Tier 4 program is not only to increase the quantity of renewable energy into Zone J, but also to increase the quantity of renewable energy consumed in the State generally. There would be insufficient public benefit to providing Tier 4 compensation for non-hydropower resources that are already operational. Although hydropower resources are not subject to

the vintage requirement, they are subject to the hydropower-specific additionality requirements discussed in detail below.

The Commission also agrees with the White Paper's recommendation to procure offshore wind separately from Tier 4 resources. As approved in this Order, NYSERDA will establish a schedule of offshore wind procurements over the period from 2021 to 2027 intended to meet the CLCPA's target of 9 GW by 2035. Were some portion of the 9 GW of offshore wind resources to be procured separately through Tier 4, their absence would reduce the level of competition in the offshore wind solicitations and could prompt the need to cancel one or more annual solicitation. Therefore, to ensure the competitiveness and regularity of the annual offshore wind procurements, the Commission deems it necessary to procure offshore wind and Tier 4 resources separately.

The Commission also declines to allow behind-the-meter resources to be eligible under Tier 4 (or Tier 1 for that matter). In its Order on Net Energy Metering Transition, Phase One of Value of Distributed Energy Resources, and Related Matters, the Commission carefully considered and balanced a number of policy issues related to appropriately pricing the value of distributed energy resources (VDER).⁶¹ There is no indication in the record that the VDER rate adopted in that Order is creating a disincentive to the continued development of behind-the-meter resources in Zone J. We see no reason to revisit the VDER construct here.

4. Additionality Criteria for Hydropower Resources

In the White Paper, NYSERDA and Staff proposed two additionality criteria applicable to hydropower resources. The

⁶¹ Case 15-E-0751, et al., Order on Net Energy Metering Transition, Phase One of Value of Distributed Energy Resources, and Related Matters (issued March 9, 2017).

first proposed criterion, the Supplier Energy Baseline, holds that Tier 4 RECs would only be compensated if and to the extent renewable generation is delivered to the NYCA that exceeds the three-year historical baseline of renewable energy that the supplier and its affiliates have delivered to the NYCA. NYSERDA and Staff explained that the purpose of this requirement is to ensure that Tier 4 deliveries are not met through re-directing the use of existing resources in a way that provides no net benefit to the State.

The second proposed additionality criterion, the Supplier GHG Baseline, holds that Tier 4 RECs would only be compensated so long as the associated energy represents a net increase in the supplier's total renewable energy generation as compared to a three-year historic baseline. The White Paper explained that the purpose of the Supplier GHG Baseline is to ensure that the energy associated with the Tier 4 RECs is not backfilled by fossil fuel-fired resources supplied to the historic recipient of such energy.

With respect to the Supplier Energy Baseline, HQUS commented that it would be required to fill existing interties regardless of market needs and price signals and, in doing so, would restrict it from using this valuable operational flexibility to reduce negative pricing events that curtail renewable energy in the State. HQUS asserted that forcing continued large deliveries into Upstate New York would increase the occurrence of negative pricing events and curtailments of upstate renewables. HQUS also maintained that requiring a supplier to make uneconomic sales simply in order to maintain a baseline would lead to an increase in Tier 4 prices. HQUS claimed that the baseline would reduce its ability to use its hydropower assets to act like a battery to more efficiently

integrate higher penetrations of renewable generation in New York.

Other commenters, including Clean Energy Advocates, commented that the three-year measure of historical renewable energy supplied to the NYCA is an inappropriate metric. These commenters suggested that the highest or most recent year should be used to establish the baseline instead. Other commenters, including NYPA and HQUS observed that, due to the significant annual volatility of hydropower generation, longer periods should be used to set baseline measurements. NYPA recommend that baselines for hydropower go back to the online date for each resource.

With respect to the Supplier GHG Baseline, HQUS commented that it fails to account for changing market conditions and factors outside the supplier's control. HQUS argued that the proposed GHG baseline would increase the cost of Tier 4 contracts and would cause opportunities to maximize carbon reductions to be missed, by restricting its operating flexibility to act in a manner like a battery to facilitate high penetrations of wind and solar resources.

While many commenters appeared to support the intent of the Supplier GHG Baseline, some commenters, including Clean Energy Advocates and IPPNY, contend that it did not go far enough because it preserves an incentive for suppliers to develop new hydropower impoundments.

The Commission views the purpose of the Supplier Energy Baseline as promoting the State's economic interests by ensuring that the deliveries of existing renewable energy by the Tier 4 supplier are maintained and not displaced as a result of the Tier 4 program. But the State would not benefit economically were the Supplier Energy Baseline to result in increasing significantly the cost of the Tier 4 program or cause

the supplier to engage in uneconomic deliveries into the NYCA that displace in-state renewables and exacerbate transmission constraints. HQUS commented that the Supplier Energy Baseline could do just that, by forcing it as a potential supplier under the program, to maintain a schedule of hydropower deliveries into northern New York that could become uneconomic as the penetration of renewable energy increases in that region.

The Commission is concerned that the Supplier Energy Baseline, rigidly applied, could result in the unintended consequence of both compromising the cost-effectiveness of the Tier 4 program and encouraging uneconomic dispatch of resources. Therefore, the Commission directs NYSERDA to solicit Tier 4 bids both with and without the Supplier Energy Baseline and to evaluate them based on their overall value to the State. Should NYSERDA select a bid with a Supplier Energy Baseline, the Commission further authorizes NYSERDA to negotiate terms with the selected project or portfolio of projects that result in a Supplier Energy Baseline tailored to the unique circumstances of the supplier. Such terms, like all material terms in the agreement, would be subject to the Commission's review to determine whether the agreement, as a whole, advances the public interest.

The purpose of the Supplier GHG Baseline, on the other hand, is environmental rather than economic. The Supplier GHG Baseline ensures that deliveries of hydropower under Tier 4 are not simply backfilled by fossil resources elsewhere on the grid. The Supplier GHG Baseline does this by requiring that any REC compensated under Tier 4 represents the environmental attributes associated with a net increase in the supplier's total generation of renewable energy. The Supplier GHG Baseline is central to the integrity of the Tier 4 concept and cannot be compromised. Indeed, in this Order the Commission is

strengthening the Supplier GHG Baseline by ensuring that it does not inadvertently incentivize the construction of new hydropower impoundments.

The Commission directs NYSERDA to apply provisions in any Tier 4 agreement specifying that Tier 4 RECs may only be compensated to the extent that they are associated with increased generation of renewable energy by the supplier. Specifically, the baseline should be calculated as an historical average of hydropower generated by the supplier. Renewable generation used to satisfy the baseline should be calculated as the sum of (1) hydropower generated by the supplier, less any generation from new impoundments not already under construction as of the date of this Order, and (2) non-hydropower generation that (a) meets the definition of "renewable energy systems" under the CLCPA, (b) is not compensated elsewhere under the CES, and (c) meets the Tier 4 vintage requirement for non-hydropower resources.

NYSERDA should have the flexibility to develop rules for suppliers to satisfy the Supplier GHG Baseline through annual averaging and to implement contract provisions that excuse the supplier from compliance with the Supplier GHG Baseline only in temporary, force majeure-type circumstances that fall entirely out of the supplier's control. Participants proposing the use of hydropower resources in the Tier 4 program will further be required to provide the historical information necessary to implement these requirements and to consent to any tracking or auditing provisions that NYSERDA deems reasonably necessary to verify compliance with the additionality criteria.

With respect to the historical sample period used to set the two baselines, the Commission declines to adopt the three-year average proposed in the White Paper. The baselines will be applied to the supplier's entire portfolio rather than a

single resource. Therefore, an average of past years will capture not only the annual volatility in production that results from changing water flows, but also capacity additions that may have come online during the sample period. If, in the case of a particular supplier, a capacity addition came online midway through the sample period, the resulting average could present a misleading baseline for that supplier. At the same time, using only three years of data may be an insufficient length of time to establish a representative sample of hydrological conditions.

Therefore, the Commission directs NYSERDA to require all Tier 4 applicants to provide the historic renewable energy delivered to the NYCA (not less than 20 years), historic generation baseline of average annual hydropower production (not less than 20 years) with the corresponding water flows as measured by the U.S. Geological Survey (USGS) gauges or best available data sources, capacity additions, and other pertinent information that NYSERDA may request. Applicants should be invited to propose their own baseline generation levels based on this data with an accompanying justification. But, ultimately, NYSERDA and Staff should exercise its judgment regarding the appropriate baselines for each supplier, using the 20 years of data to determine baseline generation levels adjusted for both capacity additions and the broadest possible historical measure of water flows for each resource. Because suppliers may be reluctant to commit to Tier 4 pricing before knowing how NYSERDA and Staff will assess their baselines, NYSERDA is authorized to address baseline issues prior to the submission of binding Tier 4 bids, as it may deem necessary.

5. Delivery Requirement

In the White Paper, NYSERDA and Staff proposed that the Tier 4 delivery requirement could be satisfied: (1) by

locating a utility-scale eligible resource directly in Zone J, or (2) by demonstrating that the eligible resource will be delivered using a new transmission interconnection into Zone J. The White Paper proposed to define a transmission interconnection into Zone J as "new" if it electrically interconnects into Zone J after the date of this Order. The White Paper further explained that suppliers seeking to qualify under Tier 4 may demonstrate that their resource is deliverable into Zone J through documentation derived from the appropriate NYISO process. NYSERDA and Staff noted that a determination by NYISO that the resource qualifies as a capacity resource for Zone J would satisfy the delivery requirement, but need not be the only basis upon which a resource may establish its ability to deliver renewable energy into Zone J, and that a resource need not participate in the Zone J capacity market to generate Tier 4 RECs.

Finally, the White Paper proposed that the Tier 1 delivery requirements clarified elsewhere in the White Paper would also apply to Tier 4. These delivery requirements include an "hourly matching" provision whereby out-of-state intermittent resources that participate in Tier 1 solicitations may sell and transmit energy as it is generated into the spot market of the control area of its location without simultaneous transmission into the NYCA, so long as an equal quantity of energy is transmitted out of the affected spot market into the NYCA for end-use during the same hour as the renewable generation is produced.

Several commenters, such as Invenergy, New York Renews and the City contend that only suppliers that qualify as capacity resources in Zone J should qualify under Tier 4. The City claims that Tier 4 resources that are not capacity

resources will not achieve the program's stated goals because fossil fleet will continue to run.

Boralex argues that the hourly matching rule in the Tier 1 delivery requirements should be relaxed for Tier 4, so that energy can be stored on the injection side of the transmission line for later transmission to Zone J when the renewable output is lower.

The Commission adopts the White Paper proposal requiring a resource either be located in Zone J or delivered to Zone J over a new transmission interconnection in order to be compensated under Tier 4. A transmission interconnection will be considered new for purposes of Tier 4 if it electrically interconnects after the date of this Order. It is unnecessary for the Commission to impose prescriptive requirements in this Order to substantiate that a resource is delivered using a new transmission interconnection into Zone J. Applicants under Tier 4 need only supply energy into Zone J and need not qualify as capacity resources in Zone J. Applicants should have the flexibility to substantiate that their energy is being delivered to Zone J using the best available documentation from each applicable control area. Should there be any question whether a specific resource would in fact meet the Tier 4 delivery requirement, that issue would be better addressed by the Commission with the benefit of a full factual record and in the context of the proceeding to determine whether to approve the Tier 4 agreement.

The Commission disagrees with Boralex that it should relax the hourly matching requirement for Tier 4. The hourly matching requirement ensures that the resource receiving the REC is in fact the resource providing energy into the NYCA. Moreover, the scenario posited by Boralex, in which the generation from a wind farm is stored in a hydropower resource

or a battery and dispatched at a later time, does not suggest the need for a rule change. In that scenario, the storage resource, so long as it was eligible for Tier 4, could be included in the same portfolio as the wind farm and could receive the Tier 4 REC in compliance with the hourly matching requirement.

6. Procurement Quantity

The White Paper proposes that Tier 4 have no minimum procurement quantity and a maximum procurement quantity of 3,000 MW through one or more solicitations. In their comments to this proposed program element, no party contended that Tier 4 should have a minimum procurement quantity greater than zero. Several parties, including the City and TDI, argued that Tier 4 should not necessarily have a maximum procurement quantity either. Other parties, such as Sierra Club, Borrego, and ACE NY argued that the proposed maximum procurement quantity of 3,000 MW is inadequately justified in the White Paper or is so high as to risk displacing in-state renewables in the event that the entire maximum procurement quantity was contracted to out-of-state resources.

The Commission agrees with NYSERDA and Staff that there should be no minimum procurement quantity. As noted above, there is fundamental uncertainty regarding the quantity and quality of bids that would be received under a Tier 4 solicitation and no guarantee that any bids will be received that advance the public interest. NYSERDA should therefore be free not to select any projects under Tier 4.

With respect to the maximum procurement quantity, the Commission agrees with NYSERDA and Staff that 3,000 MW is a reasonable upper limit because it is appropriately scaled to the task of reducing New York City's reliance on fossil generation. Nevertheless, the Commission does not expect that 3,000 MW of

competitive bids would be available to the Tier 4 program in the near term. Therefore, the Commission directs NYSERDA to impose a non-binding limit of 1,500 MW on its first Tier 4 Solicitation that it may exceed only upon receipt of proposals that are sufficiently compelling to warrant such a major commitment from the State.

7. Solicitation Process and Contracting

The White Paper, NYSERDA and DPS Staff propose further proposes that Tier 4 follow largely the same solicitation and contracting process used for Tier 1. NYSERDA and Staff propose that the Tier 4 solicitation process would begin with an open solicitation accompanied by a standard form contract for the purchase and sale of Tier 4 RECs. Applications would be reviewed by NYSERDA and DPS Staff using the same evaluation criteria and weighting factors used for Tier 1. With respect to the standard contract terms, the White Paper proposes that NYSERDA offer Tier 4 contracts with a tenor of up to 30 years. NYSERDA and Staff also propose that NYSERDA be authorized to procure Tier 4 RECs at no cost during any hour in which the real-time LBMP is less than zero.

Some commenters questioned whether the evaluation criteria and weighting factors for Tier 1 should also apply to Tier 4. Ravenswood observed that the Tier 1 weighting factors assign only a 10% weight to economic benefits. Other commenters likewise question whether out-of-state projects would return the same level of economic benefits as in-state projects. With respect to contract tenor, several parties, including NYOWA, argue for a maximum contract tenor of 25 years to align with the offshore wind program.

Regarding the proposal to obtain Tier 4 RECs without additional compensation in negative LBMPs hours, HQUS argues that because Tier 4 projects must deliver to Zone J they are

unable to mitigate the risk of negative prices in Zone J. HQUS notes that, while historically there have been few occurrences of negative prices in Zone J, market dynamics may change over the course of a 30-year contract. On the negative LBMP question, NYISO observes that the proposal had potential benefits but also potential unintended consequences. NYISO states that it "recommends, and would like to support, further analysis and discussion required by NYSERDA and DPS Staff before implementing this change to the renewable energy procurement structure."⁶²

Having reviewed this aspect of the White Paper and comments thereto, the Commission directs NYSERDA to issue a Tier 4 Solicitation within 60 days of this Order. At the discretion of NYSERDA and Staff, the solicitation may have a fixed deadline for proposals or may be held open on a rolling basis for an extended period. The solicitation should take a flexible approach to what types of proposals are considered, allowing fixed or index REC bids from any entity without restriction based on public ownership. Proposals may consist of individual generation projects or portfolios of generation projects delivered over the same new transmission interconnection or located in Zone J. Proposals may also include projects that presently hold Tier 1 agreements with NYSERDA but have yet to reach commercial operation, so long as the conversion from a Tier 1 to Tier 4 agreement would result in an increase in value to the State above its existing entitlement under the Tier 1 agreement. To maintain consistency and comparability with the Offshore Wind Standard, Tier 4 agreements should have a maximum contract tenor of 25 years, rather than the 30 years proposed in the White Paper. Bidders should also have the flexibility to propose commercial operation dates tailored to the requirements

⁶² NYISO Comment, p. 8.

of their project and the timing of associated transmission. However, while NYSERDA should be afforded flexibility in evaluating projects with a range of expected commercial operation dates, NYSERDA should also consider contracting measures intended to reinforce the proposer's capacity to achieve the commercial operation date proposed in its application. For example, as in the offshore wind context, NYSERDA should consider the use of project labor agreements in the Tier 4 program as a means to ensure timely deployment.

Once bids are received, NYSERDA may negotiate with each proposer on price and other project-specific material terms,⁶³ so long as an equal opportunity is provided for negotiation with each qualified bidder. If NYSERDA issues a solicitation with a single due date and where multiple bids are received, it shall then apply the same evaluation and weighting criteria used in Tier 1 solicitations for the purposes of rank-ordering those bids: 70% price; 20% project viability, operational flexibility, and peak coincidence; and 10% economic benefits. However, unlike in Tier 1 solicitations in which broad competition is assured, for Tier 4 the evaluation process will not stop after ranking the projects. For the highest ranked bid or bids, NYSERDA and Staff must then proceed to evaluate whether each agreement will advance the public interest of the State. To conduct that review, NYSERDA and Staff should apply the same criteria the Commission will use in deciding whether to approve the agreement. Those criteria should include but need not be limited to: (1) whether the agreement is a cost-effective means of progressing toward the CLCPA's 2030 and 2040 Targets in light of the unique challenges of reducing fossil

⁶³ Non-project specific contract provisions, such as the seller's obligations to honor prevailing wage and environmental obligations shall not be subject to negotiation.

fuel use in Zone J; (2) the extent to which the selected project or projects will enable reduced reliance on fossil-fuel fired generation located in Zone J; (3) the degree to which the selected project or projects complement the foreseeable deployment of offshore wind within Zone J; (4) impacts to disadvantaged communities; (5) project viability; and (6) economic benefits to the State. In a case where there is no need or opportunity to rank-order bids, perhaps because NYSERDA has issued a solicitation with a rolling deadline, NYSERDA and Staff may dispense with evaluating the proposal under the existing Tier 1 criteria and may proceed directly to the public interest review described above.

Additionally, as discussed more fully below in Section I, NYSERDA is directed to continue to take measures to ensure that the interests of disadvantaged communities are explicitly valued in the selection process, and build upon its workforce development policies to specifically promote good jobs in disadvantaged communities, including the broadest possible application of prevailing wage requirements in NYSERDA agreements, and procurement policies that reward community workforce agreements, apprenticeship programs and other training programs in disadvantaged communities, in all Tier 4 procurements.

With respect to the White Paper's proposal to obtain Tier 4 RECs at no additional cost during hours when the real time LBMP at the point of delivery is negative, the Commission directs NYSERDA and Staff to impose such a provision in Tier 4 agreements, provided that the provision is developed after consultation with NYISO staff as recommended in the NYISO's comments. In any hour when real-time LBMPs are negative in Zone J, it is very likely that other renewable energy resources will be on the margin. Thus, there may be little environmental

benefit from the supplier dispatching during that hour, and little reason to compensate the environmental attribute. While the Commission concluded above that this provision need not be immediately reflected in the next tranche of Tier 1 contracts, the Commission does believe that the Tier 4 contracts require this provision. There is a significant potential for Tier 4 bidders to represent large controllable HVDC transmission lines with very high capacity factors. This distinguishes Tier 4 from Tier 1's regular projected procurements of many, much smaller intermittent generators. That said, careful attention must be paid to the prospect that uncertainty regarding the incidence of negative LBMP hours in future years could lead to the State paying a risk premium for this policy. Accordingly, NYSERDA and Staff are directed to consider terms that would limit the seller's risk of loss should the number of negative LBMP hours exceed expectations.

8. Joint Purchasing and Re-sale of Tier 4 RECs

In the White Paper, NYSERDA and Staff propose that, to accommodate potential arrangements with New York City LSEs, NYSERDA should have the discretion to purchase any percentage or fixed quantity of RECs delivered by a selected project, and to enter contractual arrangements with more than one entity as may be necessary. The White Paper also recommends that, to help defray the cost of the Tier 4 program, NYSERDA should offer Tier 4 RECs for re-sale to the voluntary market, including buyers interested in using those RECs for compliance with New York City's Local Law 97. NYSERDA and Staff propose that Tier 4 RECs available for re-sale be priced competitively, subject to a price floor set at NYSERDA's own net levelized procurement costs (including administrative costs).

Numerous parties support allowing NYSERDA to re-sell Tier 4 RECs and to place a price floor on those re-sales at

NYSERDA's procurement costs. Commenters were mixed on whether RECs re-sold into the voluntary market should be deducted from the State's progress toward the 70 by 30 Target. Parties also split on how the excess revenue should be allocated in the event NYSERDA sells Tier 4 RECs for more than its procurement costs. LIPA contends that NYSERDA should use the excess revenue to reduce Tier 4 REC procurement costs. The City argues that such excess revenues should be used to support energy efficiency and distributed generation programs in the City, including those that benefit disadvantaged communities.

The City also argues that, when a building owner obtains a REC for Local Law 97 compliance, the REC should be counted toward an LSE's CES compliance obligations on a one-for-one basis, up to the LSE's CES compliance requirement corresponding to that building owner's load. The City contends that, absent such a rule, building owners will pay twice for RECs: once for Local Law 97 compliance, and again for the CES.

The Commission directs NYSERDA to offer any Tier 4 RECs it obtains for re-sale to the voluntary market. Such re-sales should be subject to a price floor set at NYSERDA's procurement costs, including administrative costs. Re-sales of Tier 4 RECs should be competitively priced, such that if the demand for Tier 4 RECs outstrips supply, the price may exceed NYSERDA's procurement costs. If re-sale prices do exceed procurement costs, the excess revenue should be dedicated by NYSERDA to energy efficiency programs in disadvantaged communities in Zone J. While the White Paper proposed the re-sale of Tier 4 RECs through 2029 only, the Commission sees no reason to limit these sales in this manner and authorizes NYSERDA to re-sell Tier 4 RECs without a limit on the timeline for such sales.

When Tier 4 RECs are re-sold, the reduction in Tier 4 RECs held by NYSERDA will reduce each LSE's compliance obligation commensurately. But no other aspect of the LSE compliance obligation will change. The City suggests that when voluntary buyers purchase Tier 4 RECs, those buyers' LSEs should see a reduction in their compliance obligation. Local Law 97 is a New York City law and the City has discretion to determine the compliance obligations for that program. But the Commission will not compromise its longstanding CES compliance requirement that all LSEs obtain and retire the appropriate quantity of RECs to substantiate compliance with each tier, including the new Tier 4.

The Commission disagrees with commenters who contend that RECs sold to non-LSE buyers should not count towards the State's compliance with the 70 by 30 Target. The Commission has long maintained that voluntary purchases of renewable energy count toward statewide targets.⁶⁴ The CLCPA is consistent with that approach. The CLCPA requires 70% of the electric generation secured by jurisdictional LSEs to be from renewable energy systems but does not differentiate whether the renewable energy is financed through a voluntary REC or a compliance REC so long as the renewable generation is consumed in the State. Accordingly, in tracking and substantiating attainment of the 70 by 30 Target, the Commission will look to actual levels of renewable energy consumed within the State's electric system, without regard to whether RECs retired in the State result from voluntary purchases or compliance purchases.

9. LSE Compliance

In the White Paper, NYSERDA and Staff propose that, because Tier 4 is an integral component of achieving the

⁶⁴ See, CES Framework Order.

statewide 70 by 30 Target, it should be the financial responsibility of all LSEs serving retail load in the territory of electric distribution companies (EDCs) to support these resources.⁶⁵ The White Paper further proposes that other non-jurisdictional LSEs, such as LIPA and NYPA, would be expected to adopt Tier 4 targets that are proportional to their load and reflect the Statewide goal. The White Paper suggests that, as part of their annual reports to NYSERDA, LIPA and NYPA would also report on their intent to participate in NYSERDA's upcoming annual Tier 4 CES procurements. Finally, the White Paper proposes that NYSERDA file an implementation plan for stakeholder comment, that would include a description of the compliance obligation calculations, process and structure, as well as a standard purchase agreement for ultimate Commission approval.

Several parties including MI, NUCOR, NYMPA, and Named Utilities, argue that if a CES tier is needed to promote renewable generation in a specific region of the State, the tier should be funded by the customers in that region, not statewide. Other commenters, including the City, CPA and Con Edison, comment that the Tier 4 obligations should be borne statewide either because it addresses a common obligation under the CLCPA or because it creates benefits statewide.

As proposed in the White Paper, each LSE will be obligated to purchase qualifying Tier 4 RECs (less any Tier 4 RECs re-sold in the voluntary market) in proportion to its overall share of statewide load. The LSE compliance obligation will be administered in a manner similar to the ZEC program.

⁶⁵ The White Paper specifies that these LSEs encompass investor-owned distribution utilities, ESCOs, CCAs not served by ESCOs, jurisdictional municipal utilities, and any retail customers self-supplying through the NYISO.

The LSEs' contracts with NYSERDA⁶⁶ for Tier 4 would be based on forecasts of load and utilize a balancing reconciliation at the end of each program year such that each LSE will have purchased the correct proportion of Tier 4 RECs on an annual basis. The Commission further directs NYSERDA to file an implementation plan for stakeholder comment and ultimate Commission approval that will include a description of the compliance obligation calculations, process and structure, as well as a standard purchase agreement within 12 months of the issuance of the Tier 4 RFP discussed above.

This approach appropriately allocates the cost of meeting the CLCPA's 2030 and 2040 Targets statewide. The purpose of Tier 4 is not to confer a special benefit on a particular area of the State but to facilitate statewide compliance with the CLCPA. Thus, contrary to the suggestion of some commenters, there is no basis for allocating a disproportionate cost of Tier 4 to Zone J customers. Like every tier within the CES, each of which has its own geographic characteristics, the financial responsibility for Tier 4 is most fairly allocated on a statewide load-share basis.

G. Repowering

In the White Paper, NYSERDA and Staff propose to create an opportunity for repowered renewable facilities to become eligible for Tier 1. Under existing rules articulated in the Commission's 2018 Baseline Order,⁶⁷ repowered facilities may become eligible for Tier 1 only as "upgrades" to existing

⁶⁶ As under Tier 1 and the Offshore Wind Standard, LSEs may obtain Tier 4 RECs independently of NYSERDA and use those RECs for their Tier 4 compliance.

⁶⁷ 2018 Baseline Order, p. 31.

facilities. As upgrades, these repowered facilities may claim their incremental production - but not their baseline production - as eligible for Tier 1. Incremental production from upgrades is calculated as the production that exceeds the facility's historic generation levels.⁶⁸

NYSERDA and Staff propose that repowered facilities be allowed to claim their entire capacity as eligible for Tier 1 but only when they reach the end of their useful life and if they meet certain eligibility criteria related to the size and nature of the repowering investment. NYSERDA and Staff propose to define useful life for this purpose as 20 years for wind and solar facilities and 50 years for hydroelectric facilities. Before the end of the facility's useful life, the facility would not be eligible for Tier 1 except as an upgrade, whereby its incremental generation would qualify for Tier 1 to the extent it exceeds the facility's projected generation as verified by a third-party engineering report. NYSERDA and Staff note that generation up to the projected amount may be eligible for Tier 2 but, in any case, must be delivered for end use to the NYCA. NYSERDA and Staff explain that the goal of their proposal was "to ensure that existing facilities see the correct price signal for repowering, while avoiding any duplicative expenditure of ratepayer funds for facilities that have already received support and have yet to reach the end of their useful lives."⁶⁹

In addition to the generally applicable requirements for Tier 1, NYSERDA and Staff proposed the following criteria for a repowered facility to qualify as eligible for Tier 1:

1. The repowering must include replacement of each prime mover, and result in an overall increase of 15% or more in the production of the generation unit compared to its projected future output. For purposes of this requirement,

⁶⁸ See, Final Phase 1 Implementation Plan, p. 3-4.

⁶⁹ White Paper, p. 61.

"prime mover" shall be defined as follows: for wind facilities, the wind turbine, including the generator, gearbox (if any), rotor and blades; for solar PV facilities, the modules and inverters; and for hydroelectric facilities, the generator, the entire turbine and structures supporting the turbine, but not the building housing the turbine.⁷⁰

2. The repowering must have the result that 80% of the tax basis per Generally Accepted Accounting Principles (GAAP) from the completed Repowered Facility (not including its property and tangible assets) is derived from capital expenditures made on or after the date of a Commission order implementing this proposal. An independent audit and verification will be required. Certification will be required and submitted at the time of the resource eligibility determination under Tier 1 of the RES.⁷¹

Commenters generally support the concept that repowered facilities should become eligible for Tier 1 at the end of their useful lives. But several commenters, including ACE NY, Boralex, and Brookfield, contend that the eligibility criteria should be more flexible by allowing a facility to become eligible if it meets only one of the three eligibility criteria: (1) replacement of the prime mover; (2) 15% increase in production; or (3) capital expenditure in excess of 80% of the tax basis. In making this argument, ACE NY offers the hypothetical example of a 20-year old wind facility that replaces 50 of 60 turbines because 10 turbines must come down at the request of a landowner or to meet new permit conditions. In this circumstance, ACE NY maintains that the production would not increase by 15% but the repowering would nevertheless meet

⁷⁰ While the White Paper included the nacelle in the definition of "prime mover," the Commission removed this component from this definition as the nacelle is not typically replaced as part of a wind turbine repowering effort.

⁷¹ White Paper, p. 62.

the other two criteria and would therefore warrant Tier 1 eligibility.

Commenters, including ACE NY and NHA, also maintain that the eligibility criteria do not fit hydropower repowerings. ACE NY suggests three reasons for this claim: (1) hydropower repowerings often require substantial investment in equipment other than the prime mover, such as intake structures, and thus neither replace the prime mover nor meet the 15% increased generation requirement; (2) hydropower repowerings often involve refurbishing rather than completely replacing the prime mover; and (3) the 80% capital expenditure requirement is confusing as applied to hydropower resources that hold significant book value in non-generating civil structures such as dams, canals and intake structures. As an alternative, both ACE NY and NHA suggest FERC relicensing as an eligibility criterion for hydropower projects.

The Commission accepts the repowering proposal contained in the White Paper, with the modification noted above regarding the definition of prime mover for wind facilities, and one additional modification for hydropower resources described below. The Commission rejects the notion that satisfying only one of the three criteria should suffice for Tier 1 eligibility. Under that approach, a facility could, for example, qualify its entire capacity for Tier 1 simply by adding 15% more turbines or solar modules. Were an existing facility to add more turbines or modules, it should be able to claim the incremental generation under Tier 1 as an upgrade, but it should not be able to claim generation from the legacy turbines or modules as Tier 1. Likewise, the requirement that repowerings increase renewable generation and thus advance progress toward the 70 by 30 Target is an essential policy objective motivating this proposal to expand Tier 1 eligibility. The hypothetical case

posited by ACE NY in which the wind farm is required to remove a certain number of turbines would appear to be a sufficiently unusual circumstance that it should not justify eliminating this important eligibility criterion.

The Commission is persuaded, however, that the prime mover replacement criterion may be inappropriate as applied to hydropower resources. As the commenters note, hydropower repowerings can involve substantial required investment in physical plant other than the turbine or refurbishing rather than replacing the turbine. Therefore, hydropower resources should be required to meet all of the repowering eligibility criteria except the prime mover replacement. On the other hand, the Commission is not persuaded that FERC re-licensing should substitute for the eligibility criteria articulated above. While FERC re-licensing may often entail substantial re-investment, it may not in every case and should not confer Tier 1 eligibility on its own.

H. Non-jurisdictional LSEs

1. Participation of NYPA and LIPA

As noted in the White Paper, the CLCPA describes the program the Commission must establish as applying to "electric generation secured by jurisdictional load serving entities."⁷² These entities do not include NYPA or LIPA. However, the White Paper recognized that "the ambition of the CLCPA's 70 by 30 Target makes the need for an 'integrated statewide policy' even more acute than it was for the 50 by 30 goal," and expressed an expectation that NYPA and LIPA would participate in the 70 by 30 Target.⁷³ The White Paper also expressed an expectation that

⁷² PSL §66-p(2)(a).

⁷³ White Paper, p. 9.

NYPA and LIPA would adopt Tier 4 targets that are proportional to their load and reflect the statewide goal. LIPA states that the new renewable generation required to meet the 70% goal falls into 3 distinct categories: (1) new offshore wind; (2) distributed solar; and (3) Tier 1 and Tier 4 REC procurements. NYSERDA's costs for REC procurements are allocated to LSEs according to each LSE's load ratio share. However, no LSE-specific targets have been established for category (2), distributed solar. LIPA asserts that this may result in some LSEs bearing a disproportionate share of cost-shifts related to net metering. To remedy this, LIPA proposes that the State's 6 GW distributed solar goal be similarly allocated to each LSE according to its load ratio share, and the LSE's Tier 1 and Tier 4 REC obligation be adjusted to reflect whether it exceeds or falls below its distributed solar allocation.

The Commission agrees on the need for an integrated statewide approach to achieving the ambitious CLCPA mandates, and expects that NYPA and LIPA will meet their proportional shares of the statewide goals under Tier 1 and Tier 4.⁷⁴ This underscores the importance of ensuring ongoing coordination with NYPA and LIPA, which have already agreed to notify NYSERDA annually by sending a report on how they have contributed to the achievement of the CLCPA Targets in the prior year, along with a notice indicating the extent to which they intend to participate in NYSERDA's annual CES procurements and/or fund their pro rata share of attributes procured by NYSERDA in the coming year. The Commission accepts this approach and will expect the information provided by NYPA and LIPA will be integrated into NYSERDA's

⁷⁴ The Tier 2 obligations are discussed separately under the Tier 2 section of this Order. The ZEC obligations under Tier 3 are expected to continue to apply to NYPA and LIPA, notwithstanding NYPA's shortfall in collections discussed below.

public reporting, as discussed in the Reporting section. NYPA's annual report should include municipal utilities and rural cooperatives that obtain their full requirements from NYPA. Because LIPA's proposal to adjust REC obligations merely addresses the equity of the allocation of LSE compliance obligations - and notably does not require the direct unlevel competition between BTM resources and large-scale resources for REC awards - we find that this proposal may have merit. However, the record and our final decision would benefit from receiving comments on this proposal from interested stakeholders, especially other LSEs. Therefore, we will ask the Secretary to issue a notice requesting comments on LIPA's proposal, with the comments due 60 days after the date of this order.

2. NYPA ZEC deficit

As noted in the White Paper, NYPA has signaled its intention to meet the renewable targets through independent efforts, although "unilateral action is not possible with respect to ZEC procurement as NYPA must contractually negotiate such purchases directly with its customers."⁷⁵ While NYPA works to renegotiate those contracts and reduce the quantity of "uncollectible" load, the current ZEC payment deficit of approximately \$34 million should be resolved in the near-term. The Commission rejects NYSERDA and Staff's proposal to use uncommitted and unspent funds for this purpose. Instead, the Commission agrees with several commenters who argue that those funds have been collected for a different purpose and should not be used to meet ZEC obligations. The Commission expects those uncommitted and unspent funds will be earmarked for other programs and instead directs the use of an IOU backstop for the

⁷⁵ White Paper, p. 65.

purpose of collecting the NYPA deficit amount, as is discussed below. IOUs are directed to collaborate with NYSERDA, Staff and other interested parties to develop a backstop mechanism to address the NYPA ZEC deficit, and the IOUs shall file tariffs including such a mechanism. The mechanism must give NYSERDA sufficient flexibility to manage its finances including its cash flow but also provide transparency and predictability for other stakeholders including electric distribution companies, LSEs and ratepayers. An efficient true-up method should also be considered such that large under or over collections can be avoided to the extent possible.

Going forward, NYSERDA and Staff should exclude the "uncollectable" portion of load when determining the various LSE obligations. As discussed more fully in Section K below, NYPA and LIPA have indicated that they will each provide an annual report to NYSERDA of their intentions to contribute to the ZEC or any other compliance program, at least six months prior to the start of any compliance year, which would allow NYSERDA to recalculate the obligations of the jurisdictional LSEs.

I. Disadvantaged Communities

The CLCPA codified the State's commitment to ensuring that the transition to renewable and clean energy benefits all New Yorkers, with specific attention to those in disadvantaged communities. The CLCPA defines "disadvantaged communities" as "communities that bear burdens of negative public health effects, environmental pollution, impacts of climate change, and possess certain socioeconomic criteria, or comprise high-concentrations of low- and moderate- income households, as identified pursuant to section 75-0111 of this article."⁷⁶ ECL

⁷⁶ ECL §75-0101(5).

§75-0111 (added by the CLCPA) creates a process through which the Climate Justice Working Group will establish criteria for identifying disadvantaged communities.⁷⁷

The CLCPA further provides that:

State agencies, authorities and entities, in consultation with the environmental justice working group and the climate action council, shall, to the extent practicable, invest or direct available and relevant programmatic resources in a manner designed to achieve a goal for disadvantaged communities to receive forty percent of overall benefits of spending on clean energy and energy efficiency programs, projects or investments in the areas of housing, workforce development, pollution reduction, low income energy assistance, energy, transportation and economic development, provided however, that disadvantaged communities shall receive no less than thirty-five percent of the overall benefits of spending on clean energy and energy efficiency programs, projects or investments.⁷⁸

The CLCPA focuses not only on increasing program benefits to disadvantaged communities but also on ending the disproportionate burdens that have been imposed on those communities. The CLCPA provides that, "[i]n considering and issuing permits, licenses, and other administrative approvals and decisions, including but not limited to the execution of grants, loans, and contracts, pursuant to article 75 of the environmental conservation law, all state agencies, offices, authorities, and divisions shall not disproportionately burden disadvantaged communities as identified pursuant to subdivision 5 of section 75-0101 of the environmental conservation law."⁷⁹

The CLCPA also specifically addresses how the Commission must administer the programs under its jurisdiction.

⁷⁷ Id. at §75-0111.

⁷⁸ Id. §75-0117.

⁷⁹ CLCPA §7(3).

Under the CLCPA, the Commission must design the programs for achieving the 2030 and 2040 Targets "in a manner to provide substantial benefits for disadvantaged communities . . . including low to moderate income consumers, at a reasonable cost while ensuring safe and reliable electric service."⁸⁰

In addition to these programmatic obligations, the CLCPA includes a provision to ensure that progress is tracked, and data is publicly available in order to ensure that low to moderate income (LMI) and disadvantaged communities share the benefits of the clean energy transition. The CLCPA requires the Commission to direct NYSERDA and IOUs to "develop and report metrics for energy savings and clean energy market penetration in the low and moderate income market and in disadvantaged communities . . . and post such information on the authority's website."⁸¹

The Commission is committed to advancing the interests of disadvantaged communities and LMI customers across all its programs. Although this Order focuses on CES procurements necessary to achieve the 70 by 30 Target, it is valuable context to describe the Commission's efforts to advance the interest of disadvantaged communities through other programs as well. To begin, with respect to rates paid by low-income consumers, the Commission issued an order in May 2016 adopting a policy and regulatory framework for the major electric and gas utilities in the State to provide bill discounts to low-income consumers.⁸²

⁸⁰ PSL §66-p(7).

⁸¹ CLCPA §4(c).

⁸² See, Case 14-M-0565, Proceeding on Motion of the Commission to Examine Programs to Address Energy Affordability for Low Income Utility Customers, Order Adopting Low Income Program Modifications and Directing Utility Filings (issued May 20, 2016).

The Commission adopted a policy that set the energy burden at or below 6% of household income as the target level for all 2.3 million low-income households in the State.⁸³ The Commission also directed all utilities to open their low-income discount programs to all households that receive benefits in the Home Energy Assistance Program (HEAP), regardless of fuel or benefit type.⁸⁴ In March 2020, in that same proceeding, the Commission issued an order allowing several water, electricity, and gas utilities to postpone rate increases due the hardship caused to low income customers by COVID-19.⁸⁵ Moreover, in June 2020, the Commission provided emergency relief to New York City residents enrolled in Consolidated Edison Company of New York, Inc.'s low-income discount program in the form of bill discounts designed to address challenges related to the combination of high temperatures and the limited availability of public cooling facilities in New York City this summer due to COVID-19.⁸⁶ In September 2020, DPS Staff published a Host Community Benefit Program Proposal. In the filed Proposal, DPS Staff proposes that residential electric utility customers residing in a renewable Host Community receive an annual bill credit for each of the first ten years that a Major Renewable Energy Facility operates in that community. Funding for the bill credits would

⁸³ Id., p. 3.

⁸⁴ Id., p. 14-15.

⁸⁵ See, Case 14-M-0565, supra, Order Postponing Approved Electric and Gas Delivery Rate Increases and Updated Reduction to the Low Income Discount Credit and Temporarily Waiving Certain Tariff Fees (issued March 25, 2020).

⁸⁶ Case 20-M-0231, Petition of City of New York for Emergency Relief To Vulnerable Utility Customers Arising From The COVID-19 Pandemic, Order Approving Temporary Emergency Financial Relief for Electric Low-Income Bill Discount Program Customers (issued June 11, 2020).

be provided by the owners of the major solar and wind renewable energy facilities by paying an annual fee of \$500 per megawatt (MW) and \$1,000 per MW, respectively, of nameplate capacity. The fees paid by a Major Renewable Energy Facility would be distributed equally among the residential utility customers within the Host Community of the facility.⁸⁷

With respect to energy storage, the CLCPA requires the Commission: "[t]o the extent practicable, specify that a minimum percentage of energy storage projects should deliver clean energy benefits into NYISO zones that serve disadvantaged communities . . . and that energy storage projects be deployed to reduce the usage of combustion-powered peaking facilities located in or near disadvantaged communities."⁸⁸ The Commission's efforts to achieve this goal began prior to the CLCPA, in the 2018 Energy Storage Order. In that Order, the Commission adopted a statewide energy storage goal of 3,000 MW by 2030, with an interim objective of 1,500 MW by 2025.⁸⁹ The Commission directed the State's IOUs to issue RFPs to procure dispatch rights from bulk-level energy storage systems sited within their service territories. In evaluating storage bids under the program, the Commission required the IOUs to consider local environmental benefits derived by reducing use of peaking units. The energy storage RFPs were issued in 2019 and must

⁸⁷ Case 20-E-0249, In the Matter of a Renewable Energy Facility Host Community Benefit Program, DPS Staff Host Community Benefit Program Proposal (filed September 23, 2020).

⁸⁸ PSL §66-p(7)(a).

⁸⁹ Case 18-E-0130, In the Matter of Energy Storage Deployment Program, Order Establishing Energy Storage Goal and Deployment Policy (issued December 13, 2018).

result in minimum quantities of operational resources by December 2022.⁹⁰

The CLCPA also ensures that disadvantaged communities and LMI consumers will be explicitly considered in receiving the benefits of energy efficiency programs and distributed renewable energy located in their communities. With respect to distributed solar, the CLCPA specifically provides that NYSERDA “consider enhanced incentive payments for solar and community distributed generation projects, focusing in particular but not limited to those serving disadvantaged communities . . . which result in energy cost savings or demonstrate community ownership models.”⁹¹ In May 2020, the Commission approved a petition from NYSERDA expanding the NY-Sun program in a manner intended to “dramatically advanc[e] access to solar energy for LMI customers, environmental justice communities and disadvantaged communities.”⁹² That order approved the allocation of \$135 million for additional incentives for projects benefitting LMI customers, affordable housing, and environmental justice and disadvantaged communities as well as at least \$65 million of MW Block and Community Adder incentives supporting the projects that receive those additional incentives.

For energy efficiency, the CLCPA requires the Commission to “include mechanisms to ensure that, where

⁹⁰ Id., p. 55 (directing Con Edison to procure 300 MW of bulk dispatch rights from resources that will be operational by December 2022 and the State’s other IOUs to each procure at least 10 MW.)

⁹¹ PSL §66-p(7)(b).

⁹² See, Case 19-E-0735, Proceeding on Motion of New York State Energy Research and Development Authority Requesting Additional NY-Sun Program Funding and Extension of Program Through 2025, Order Extending and Expanding Distributed Solar Incentives (issued May 14, 2020).

practicable, at least twenty percent of investments in residential energy efficiency, including multi-family housing, can be invested in a manner which will benefit disadvantaged communities . . . including low to moderate income consumers.”⁹³ In a January 2020 Order, the Commission adopted the New Efficiency New York program, requiring each of the State’s utilities to spend a budget of \$1.4 billion from 2020-2025 (on top of existing programs), with at least 20 percent of the funding to be dedicated to LMI customers.⁹⁴ That order also specifically authorized NYSERDA to allocate \$30 million to LMI heat pump programs.⁹⁵

The Commission’s January 2020 Order also directed the State’s IOUs and NYSERDA to develop a statewide LMI portfolio for energy efficiency. On July 24, 2020, IOUs and NYSERDA jointly filed a “Statewide Low- and Moderate-Income Portfolio Implementation Plan.” The plan provides a comprehensive view of the LMI program goals and implementation strategies. The plan also includes a 2020-2025 budget of \$880 million in new funding allocations, with estimated lifetime electric savings over 7,000,000 MWh, gas savings over 150,000,000 MMBtu, and GHG reductions over 11,000,000 metric tons CO₂e, while benefitting an estimated 1.2 million participants.

With respect to electric vehicles (EVs), in July 2020, the Commission issued the Order Establishing Electric Vehicle

⁹³ PSL §66-p(6).

⁹⁴ See, Case 18-M-0084, In the Matter of a Comprehensive Energy Efficiency Initiative, Order Authorizing Utility Energy Efficiency and Building Electrification Portfolios through 2025 (issued January 16, 2020).

⁹⁵ Id., pp. 47 & 83.

Infrastructure Make-Ready Program.⁹⁶ The Make-Ready Order established a tiered program with enhanced incentives for vehicle electrification in dense urban environments where there are disproportionate air pollution impacts. The Make-Ready Order also directed each utility to propose a Medium- and Heavy-Duty Fleet Make-Ready Pilot Program, with a statewide \$15 million budget. These programs will support direct reduction of diesel emissions in environmental justice communities through electrification of the medium-duty/heavy-duty vehicles/trucks. To reduce GHG emissions and capture public health benefits for disadvantaged communities, the Commission also directed funds to support regional bus electrification. In addition to the Make-Ready Programs, the Commission directed additional NYSERDA-led environmental justice programs, including: a \$40 million Environmental Justice Community Clean Vehicles Transformation Prize to ensure that communities burdened by polluting vehicle traffic benefit from new clean vehicle solutions; a \$25 million Clean Personal Mobility Prize to drive innovative and high-impact approaches that enable access to and delivery of clean transportation services, including "last-mile" solutions, to environmental justice, LMI and underserved communities; and a \$20 million Clean Medium- and Heavy- Duty Innovation Prize to drive innovative and high-impact approaches that demonstrate the viability of the most compelling opportunities with medium- and heavy- duty vehicle electrification.

Commenters generally focused on the impact that CES procurements may have for disadvantaged communities. Several commenters expressed the view that the Commission should require

⁹⁶ Case 18-E-0138, Proceeding on Motion of the Commission Regarding Electric Vehicle Supply Equipment and Infrastructure, Order Establishing Electric Vehicle Infrastructure Make-Ready Program and Other Programs (issued July 16, 2020) (Make-Ready Order).

future CES procurements to evaluate in explicit terms how each proposal would impact disadvantaged communities. Clean Energy Advocates recommend that CES solicitations require developers to identify and articulate the benefits of the project (both economic and environmental/climate) to disadvantaged communities and that NYSERDA prioritize the selection of proposals that will demonstrably benefit disadvantaged communities. NYOWA observed that the White Paper does not define how it will reward bidders for addressing the needs of disadvantaged communities. NYOWA recommended that the Phase 2 solicitation assign a specific number of points within the economic benefit category to recognize project components that will benefit disadvantaged communities and further, that the solicitation should provide specific guidance as to what constitutes benefits to disadvantaged communities such as jobs created, capital investments, and training programs.

Numerous commenters, including NY Renews, the Named Utilities and others, observed that local pollutants that result from the combustion of fossil fuels impose disproportionate burdens on disadvantaged communities and thus that the CES should reward projects that reduce those pollutants. The City of New York commented that the Commission should advance actions that promote the quality of dispatchability and the strategic location of resources to allow displacement of fossil fuel-fired peaking units. The JU argued that the monetization of reductions in co-pollutants could provide an additional path to advance the interests of disadvantaged communities and recommend that the Commission explore funding options, outside of the customer funded CES construct, that consider the primary sources of co-pollutants.

Several commenters also suggested that the White Paper consideration of impacts to disadvantaged communities in CES

procurements did not go far enough toward ensuring overall statewide compliance with the CLCPA provisions relating to disadvantaged communities. NY Renewables commented that the White Paper did not detail prioritizing hiring in environmental justice areas or otherwise prioritizing environmental justice concerns. NY Renewables urged NYSERDA and Staff to amend the White Paper to align the Renewable Energy Program with the CLCPA and State energy policy. Specifically, it is asked that (1) Staff and NYSERDA, using publicly available data, release their current CES economic impact analysis and update it to include further study on the impacts and benefits of the RES on disadvantaged communities and (2) the White Paper be modified to include a compliance framework to implement and track the CLCPA's energy justice provisions related to disadvantaged communities.

The Commission expects that the CES procurements that are the subject of this Order will result in meaningful benefits to disadvantaged communities. Disadvantaged communities bear the worst public health consequences of fossil fuel-fired generation. By achieving the 2030 and 2040 Targets, the State will greatly reduce emissions of NO_x, SO_x, and particulate matter. The greatest benefits from those reduced emissions will be realized in the communities that currently bear the cost of those emissions on a disproportionate basis.

Achieving the 70 by 30 Target will also yield significant economic benefits for disadvantaged communities. NYSERDA's 2019 Clean Energy Industry Report stated that New York has created nearly 159,000 clean energy jobs in New York since 2016, representing an 8.9% increase in this sector (more than double the job growth in the State's overall economy). Achieving the 70 by 30 Target will require still further investment and job growth throughout the renewable energy supply chain. Moreover, NYSERDA has structured its CES procurements to

promote sound employment practices. As a current practice in its large-scale renewable procurements, NYSERDA requires contractually that construction work on selected projects pay the prevailing wage, and through its selection process, NYSERDA rewards bidders that invest in workforce development.

It would be insufficient, however, simply to assume that the CES programs will benefit disadvantaged communities in general without taking measures to ensure that the interests of disadvantaged communities are explicitly valued in the selection process and advanced on a project-by-project basis. NYSERDA has already taken important steps in this regard,⁹⁷ but should be required to sustain those efforts and to go further. Therefore, the Commission directs NYSERDA to build upon its workforce development policies that promote good jobs in disadvantaged communities, including the broadest possible application of prevailing wage requirements in NYSERDA agreements, and procurement policies that reward community workforce agreements, apprenticeship programs and other training programs in disadvantaged communities. The Commission further directs NYSERDA to ensure that in all future CES procurements: (1) proposers are required under the terms of the solicitation to identify the benefits and burdens to disadvantaged communities that are likely to result from the proposed project; (2) in each solicitation, NYSERDA will present clear guidance regarding how impacts to disadvantaged communities will be assessed, and how each proposal's assessed impact to disadvantaged communities will be evaluated and incorporated into the scoring process; and (3) NYSERDA will incorporate metrics on CES investments into its reporting on the impacts in disadvantaged communities.

⁹⁷ See, NYSERDA, ORECRFP20-1, p. 27-29; NYSERDA, RESRFP20-1, pp. 1, 22, 30, 42, and 48-49.

J. Administrative Funding

As the Commission-authorized administrator of the CES, NYSERDA regularly files petitions to recover the funds necessary to cover its administrative costs for each CES subprogram in each compliance period. This results in the filing of multiple petitions each year seeking funding from the Commission. The White Paper proposes that the administrative funding for all CES programs be addressed each year through one comprehensive annual funding request instead. NYSERDA would identify and quantify the funds needed to cover NYSERDA's costs and fees to administer the RES, ZEC, and OREC programs for each calendar year, as well as for administration of the competitive Tier 2 and Tier 4 programs in this CES budget.

The White Paper notes that NYSERDA anticipates having an adequate quantity of Tier 1 RECs, ZECs, and Tier 2 RECs (if the Tier 2 program is approved) available for sale in 2021. It therefore proposes to fund administration through an adder mechanism for these programs beginning in 2021, through which NYSERDA's administrative costs for the respective programs would be allocated across the attributes NYSERDA annually sells to LSEs in each year, and via a commensurately-increased attribute price or an increased LSE rate depending on the approach taken to attribute disposition. The respective adders would reflect the approved administrative costs for 12 months and the shortfall or surplus from previous years, with the adders being reduced by any revenues received in the previous years including bid fees, alternative compliance payments, and interest income.

Under the White Paper, the 2021 administrative funds for the RES Program would be applied to the Tier 1 REC price in the 2021 RES compliance period beginning on January 1, 2021 through December 31, 2021. As authorized in the Phase 4

Implementation Plan,⁹⁸ NYSERDA will inform LSEs of the price and quantity of the Tier 1 RECs plus any Commission-approved adder at the start of each quarterly sale.

The 2021 administrative costs for the ZEC Program and shortfall for Year 3, 2019, would be applied to the 2021 ZEC compliance period, which runs April 1, 2021, through March 31, 2022. As described in the ZEC Implementation Plan, NYSERDA would notify LSEs of the ZEC rate plus any Commission-approved adder at least 2 months before the commencement of a compliance year.

For the competitive Tier 2 Program, the 2021 administrative costs would be applied to the uniform Tier 2 rate for the 2021 compliance period. NYSERDA would publish on its website a Tier 2 rate plus any Commission-approved administrative adder for the applicable compliance period.

Given that offshore wind and Tier 4 are not anticipated to produce attributes to sell in 2021, NYSERDA proposes to continue to utilize uncommitted SBC, EEPS, and RPS balances to cover administrative costs for the offshore wind program and for Tier 4.

As has been the case historically, NYSERDA indicates in the White Paper that it will continue to file quarterly itemized reports on costs associated with the administration and the development of the programs and will reconcile actual expenses with approved funding and collections and apply any differences to subsequent year collection amounts.

⁹⁸ The Phase 4 Implementation Plan was approved, subject to revisions, on August 13, 2020. Case 15-E-0302, Order Approving Phase 4 Implementation Plan (issued August 13, 2020). The Final Phase 4 Implementation Plan was filed September 14, 2020. Case 15-E-0302, Final Phase 4 Implementation Plan (filed September 14, 2020).

The White Paper notes that NYSERDA is projecting an overall shortfall in funding for administrative funds for the 2019 RES compliance year ending December 31, 2019, and the ZEC compliance year ending March 31, 2020. The variances in salary and overhead costs relate principally to differences between assumed and actual salary allocations and the difference in the New York State Cost Recovery Fee expenses relate to differences between the program's proportionate share of expenses and those that were anticipated. The White Paper proposes including the shortfall resulting from these differences in the amounts set for the REC adder charges for 2021 compliance year ending December 31, 2021, for the RES, and ZEC adder charges for the 2021 compliance year ending March 31, 2022, for the ZEC program.

NYSERDA's administrative budgets typically include staff direct and indirect salaries, fringe benefits, and other direct program operating costs and allocated general and administrative expenses, as well as technical support for program and system development. Because the procurement volumes that must be achieved through the CES will increase substantially and require significant new efforts over a series of years to achieve the CLCPA goals, NYSERDA proposes allocation of an additional 1.5 FTE in staff across the CES programs for activities including procurement, contract negotiations, contract management and analysis, as well as other related market development activities such as the administration of NYGATS.

The White Paper also includes proposals for covering the costs and fees it would incur in developing and administering the Tier 4 program. Those costs would begin in 2020 and continue through 2021, with the issuance of a Tier 4 RFP. The Tier 4 program would also require system development funding for the issuance of solicitations and anticipated revisions to NYGATS and other systems, as well as technical

support for program design and review of proposals. According to the White Paper, administration of the Tier 4 program would require an additional 1.25 FTE in staff. Activities of this staff would include issuing at least one solicitation, determining eligibility, and actively managing any contracts resulting from the solicitations. Contract management would also include settlement and invoicing of contracts. In addition, staff would need to develop processes to collect and reconcile the LSE compliance obligations for Tier 4 RECs and to integrate various financial, compliance, and progress report activities into existing reports.

NYSERDA also seeks approval for the costs of the proposed Tier 2 program, with the issuance of the first competitive Tier 2 solicitation expected in 2021. In the Tier 2 Petition, NYSERDA included a proposal regarding NYSERDA's administration of the Competitive Tier 2 program for the period beginning in 2020 and through the reconciliation process in 2026. The White Paper proposes to modify that proposal to request administrative funding associated with the administration and development of the program beginning in 2020 and through 2021, consistent with the other programs described herein. NYSERDA explains that costs categories for administration of the Tier 2 program will include technical support and system development. Technical Support includes costs associated with the on-going program consultant support and implementation for the CES programs, development and issuance of procurements, and review of submissions by technical evaluation panels. System Development includes costs for the administration, operation, and on-going maintenance of the program databases and NYGATS. NYSERDA has a five-year agreement for the administration, operation and maintenance of NYGATS that is up for renewal in early 2021. NYSERDA will seek to renew the

service contract for the operation, maintenance, and administration of NYGATS in 2021.

The White Paper also proposed that the Commission provide \$1,000,000 to support the execution of a Great Lakes Wind Feasibility Study, which is included in the technical support for the OREC program.

NYSERDA would allocate a proportionate share of the annual New York State Cost Recovery Fee to the CES program. The fee is assessed to NYSERDA and other public authorities by New York State for an allocable share of state governmental costs attributable to the provision of services to public benefit corporations pursuant to Section 2975 of the Public Authorities Law. For the past four fiscal years, the assessment has averaged about 1.18% of NYSERDA's annual expenses. NYSERDA has assumed an allocation of just under 50% of that amount to CES program costs.

The White Paper also requests that the Commission clarify that the EDC backstop mechanism should be available for all programs under the CES based on the principles already approved by the Commission. In the CES Framework Order, the Commission specifically addressed the financial risk of the CES by providing that the EDCs could be authorized by a Commission Order to collect financial "backstop" collections for the REC, ZEC, and offshore wind programs.

Of note, none of the comments addressed administrative funding. The Commission thus moves directly to address the funding elements of the White Paper. First, the Commission finds that combining administrative funding reporting and proposals for all CES programs in one comprehensive annual funding request will provide stakeholders with a clear and comprehensive opportunity to review and comment on the costs of administering the combined CES portfolio of programs.

Therefore, the White Paper proposal is adopted and NYSERDA is directed to file a comprehensive annual petition regarding funding for CES programs for years 2022 and beyond.

Second, NYSERDA's proposal to fund its administration of the Tier 1, Tier 2, and ZEC programs through an adder mechanism for the beginning in 2021 is also adopted, as it will appropriately recover the administrative costs associated with those programs. Third, NYSERDA's proposal to continue to utilize SBC, EEPS, and RPS uncommitted balances to cover administrative costs for the offshore wind program and Tier 4 is adopted as an appropriate mechanism to avoid incremental ratepayer collections before the programs are able to recover their costs directly. NYSERDA will assess bid fees as part of the solicitation processes for the offshore wind program and Tier 4, which will be used to offset their costs. If a Tier 2 solicitation is not released in 2021, NYSERDA is also authorized to use uncommitted funds to cover 2021 Tier 2 expenses.

NYSERDA incurred a shortfall in administrative funding for the 2019 RES Tier 1 compliance year ended December 31, 2019, and the ZEC compliance year ended March 31, 2020. Consistent with the process outlined in the White Paper and approved in this Order, NYSERDA shall include these budgetary shortfalls when determining the administrative adder for both the RES Tier 1 adder for 2021 compliance year ending December 31, 2021, and ZEC adder for the 2021 compliance year ending March 31, 2022.

The program budgets as shown below are approved for the 2021 compliance year.

Budgeted 2021 Administrative Expenses (\$)

(Including Salary, Overhead and Cost Recovery Fee Expenses)

Program	RES	ZEC	OREC	Tier 2	Tier 4	Total
Salary and OH	4,495,607	492,945	2,806,800	406,972	406,972	8,609,295

NYS CRF	632,473	6,400,492	102,799	407,222	18,962	7,561,948
Tech. Support	3,175,000	225,000	5,685,000	500,000	900,000	10,485,000
System Devel.	340,000	660,000	220,000	270,000	300,000	1,790,000
Total	8,643,080	7,778,436	8,814,599	1,584,193	1,625,934	28,446,243
Total FTE	14.80	1.35	8.60	1.25	1.25	27.25

While the budget estimation process needs to be refined, DPS Staff has reviewed program expenditures and proposals and determined that they are reasonable and appropriate. Moving forward, the consolidated budget proposal process should enable a clear understanding of any variances among and between programs and support continued review and oversight

As requested in the White Paper, the Commission clarifies that the IOU backstop mechanism, intended to address the financial risk of revenue shortfalls of the CES Tier 1, ZEC and offshore wind programs, will be available to all programs authorized under the CES, based on the principles already approved by the Commission in the CES Framework Order.

K. Reporting

The White Paper proposes a revised programmatic CES reporting schedule that combines and streamlines existing CES program reporting requirements and incorporates reporting related to a proposed Tier 4 program. The White Paper also proposes to adopt new reporting requirements for Tier 2 resources. In addition to NYSERDA's CES reporting requirements, LSEs are already required to submit an annual report in NYGATS documenting their Tier 1 RES compliance activities. Accordingly, the Tier 2 Petition proposes to require LSEs to incorporate Tier 2 program elements into their existing CES reports, including quarterly administrative reports, the annual

CES financial status report, the annual RES procurement performance report, and the annual CES progress report.

The White Paper also proposes replacement of the Triennial Review that was mandated in the CES Framework Order with the biennial review required by the CLCPA. The CES Framework Order requires the Commission to conduct a review of the CES initiative in 2020 and each third year thereafter.⁹⁹ The triennial review would establish fixed targets on a going-forward basis to provide certainty to market participants and include an examination of the balance between mandated demand and anticipated supply (i.e., the divergence test). The divergence test would affect the setting of procurement targets and would also be used to evaluate the effectiveness of a centralized REC-only procurement. The targets to be established in the triennial review would also reflect the development of voluntary activity. Other issues to be examined in the triennial review include: the effectiveness of compliance mechanisms, including ACPs; changes to eligibility rules; application to microgrids and combined heat and power; fuel diversity; and interactions with the Regional Greenhouse Gas Initiative (RGGI) and the federal Clean Power Plan. The first triennial review report was filed by NYSERDA on June 1, 2020.¹⁰⁰

The CLCPA requires the Commission to conduct a biennial review of the program adopted to meet the 2030 and 2040 targets, in order for the Commission to adjust program requirements as necessary. Specifically, the CLCPA requires by July 24, 2024, and every two years thereafter, that the Commission issue, for public review and comment, a comprehensive

⁹⁹ CES Framework Order, pp. 117-118.

¹⁰⁰ Case 15-E-0302, supra, Renewable Energy Standard Program Impact Evaluation and Clean Energy Standard Triennial Review (filed June 1, 2020) (Triennial Review).

review of the program that considers progress in meeting overall targets for the deployment of renewable energy systems and zero emission sources, distribution of systems by size and load zone, and annual funding commitments and expenditures. Due to the depth of analysis that will be required to ensure progress toward the CLCPA goals and the newly required biennial review process required in the CLCPA, the White Paper recommends ending the Triennial Review process after 2020 since it will become both duplicative and untimely. In its comments, CJNY suggests that the Commission adopt a process for reporting to track and report on detailed employment, job quality, economic development and investment information.

The Commission finds that the White Paper's proposals reflect NYSERDA's experience administering the CES program and ensure that robust and transparent reporting and review of each element of the CES program will continue while avoiding duplicative processes or requirements. Therefore, the Commission adopts the White Paper's proposal to consolidate CES program reporting requirements. With respect to CJNY's comments, the Commission notes that the Annual RES Compliance Report includes information on relevant economic and employment benefits of the CES program, including a summary of all RES and offshore wind solicitations, status of Tier 1 and Maintenance Tier contracts, and the incremental economic benefits realized from projects receiving RES contracts. Additionally, New York's Open NY website includes up to date information on NYSERDA procurements and contract status. Therefore, adopting a new process for tracking and reporting employment information would be duplicative. As proposed in the Tier 2 Petition, NYSERDA is also directed to incorporate the Competitive Tier 2 program reporting into the existing schedule for CES reports. The results of all CES programs will be detailed in one annual

report, making access to CES programmatic information easily available to the public. Additional information on CES reporting is detailed in Appendix D.

The Commission also adopts the recommendation to replace the triennial review with the biennial review required by the CLCPA. Retaining a separate triennial review would be duplicative to the biennial review process and result in wasted resources. The CLCPA's biennial review process will provide the timely and in-depth information necessary to adjust to market conditions and development of new technology. The triennial review was a useful tool in evaluating the results of the CES to date and in the development of the White Paper and provided a review of such issues as Tier 1 procurement results, Tier 1 REC sales, baseline resource retention, ACPs, and the use of Tier 1 banking. As a result of this inaugural review, program modifications were incorporated into the White Paper, including providing NYSERDA more flexibility in the annual Tier 1 procurement quantity to respond to changes in market conditions and extending the Index REC option to Tier 1 procurements.¹⁰¹ The biennial review will provide the same information and improvement opportunities, on an even more frequent schedule.

Additionally, NYPA and LIPA have indicated that they will each provide an annual report to NYSERDA of their intentions to contribute to the ZEC program, at least six months prior to the start of any ZEC compliance year (no later than October 1 each year), which will allow NYSERDA to calculate the obligations of the jurisdictional LSEs. NYPA's annual report should include municipal utilities and rural cooperatives that obtain their full requirements from NYPA. NYPA and LIPA will also each provide to NYSERDA an annual report on their

¹⁰¹ Case 15-E-0302, supra, Order Modifying Tier 1 Procurements (issued on January 20, 2020).

respective independent progress in pursuit of the statewide goals, along with a notice indicating the extent to which they intend to participate in NYSERDA's annual CES procurements and/or fund their pro rata share of attributes procured by NYSERDA in the coming year, at least six months prior to the start of any RES compliance year (no later than July 1 each year), for integration into NYSERDA's overall CES reporting.

CONCLUSION

Achieving the State's ambitious climate and clean energy objectives will require a multi-faceted approach that recognizes the need for continued contributions from existing resources and the procurement of significant amounts of additional resources in a timely manner. The regulatory action taken in this Order promotes the public interest and ensures that New York consumers will be well positioned to meet the State's objectives in a fair and cost-effective manner.

The Commission orders:

1. The modifications to the Clean Energy Standard proposed in the White Paper on Clean Energy Standard Procurements to Implement New York's Climate Leadership and Community Protection Act (White Paper) are adopted, with modifications, as discussed in the body of this Order.
2. The New York State Energy Research and Development Authority (NYSERDA) is authorized to conduct annual Tier 1 solicitations, beginning in 2021, in amounts necessary to ensure that 70% of load in 2030 is served by renewable energy resources, as discussed in the body of this Order.
3. NYSERDA is authorized to conduct annual Offshore wind solicitations, beginning in 2021, in amounts necessary to

achieve the statewide goal of 9 GW of offshore wind by 2035, as discussed in the body of this Order.

4. NYSERDA's petition to create a new Competitive Tier 2 program is approved, with modifications, as discussed in the body of this Order. NYSERDA shall issue, within 120 days of the effective date of this Order, a Competitive Tier 2 Solicitation, as discussed in the body of this Order.

5. Load serving entities (LSEs) in New York State shall comply with the LSE obligations under Tier 1 and the Competitive Tier 2 program of the Renewable Energy Standard in order to serve their retail customers, as discussed in the body of this Order.

6. NYSERDA shall, on or before May 1, 2021, file with the Secretary for public comment and Commission approval an implementation plan describing the Tier 2 Renewable Energy Certificates (RECs) re-sale process, timing, and its interaction with the LSE obligations and reconciliation process, as discussed in the body of this Order.

7. NYSERDA shall, within 90 days of the effective date of this order, provide each effected LSE with the standard Agreement for the Sale of Tier 2 RECs, as discussed in the body of this Order.

8. All LSEs are directed to provide NYSERDA with an executed copy of the standard Agreement for the Sale of Tier 2 RECs within 30 days of receipt of the standard Agreement, which shall be no later than 120 days after the effective date of this Order.

9. The White Paper recommendation to create a new Tier 4 within the Clean Energy Standard is adopted consistent with the discussion in the body of this Order. NYSERDA shall issue, within 60 days of the effective date of this Order, a Tier 4 Solicitation, as discussed in the body of this Order.

10. NYSERDA shall file, within 12 months and 60 days of the effective date of this Order, an implementation plan for stakeholder comment and Commission approval that includes a description of the Tier 4 compliance obligation calculations, process and structure, as well as a Tier 4 standard purchase agreement as discussed in the body of this Order.

11. NYSERDA and Department of Public Service Staff shall file any agreement for the procurement of Tier 4 RECs with the Secretary for public comment and Commission approval.

12. NYSERDA shall utilize the investor owned utility backstop mechanism for the purpose of collecting the amounts necessary to cure the New York Power Authority Zero Emissions Credit deficit.

13. NYSERDA shall, within 180 days of the effective date of this Order, commence a Great Lakes offshore wind feasibility study, as discussing in the body of this Order.

14. The administrative funding proposed in the White Paper is approved as discussed in the body of this Order.

15. The Clean Energy Standard reporting requirements proposed in the White Paper are approved as discussed in the body of this Order.

16. 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.

17. This proceeding is continued.

By the Commission,

(SIGNED)

MICHELLE L. PHILLIPS
Secretary

ELIGIBLE TIER 1 RESOURCES

	SOURCE	OTHER REQUIREMENTS
Fuel Cells	Solid Oxide Fuel Cells (SOFC) Molten Carbonate Fuel Cells (MCFC) Proton Exchange Membrane Cells (PEM) Phosphoric Acid Fuel Cells (PAFC)	Must utilize a non-fossil fuel resource, such as hydrogen (or other fuel), that has been produced using a "renewable energy system" ¹ as a primary source.
Hydroelectric	Upgrades	No new storage impoundments; eligibility limited to the incremental production associated with the upgrade.
	Low-Impact Run-of-River Hydroelectric	No new storage impoundments.
Geothermal Electric		
Geothermal Ground Source Heat		
Solar Photovoltaics and Thermal		
Tidal/Wave/Ocean	Tidal and Ocean Wave or Current (turbines and other rotary motion drives)	
	Ocean Thermal Pumped Storage Hydro Powered by Tidal	
On Land and Offshore Wind	Wind turbines	

¹ The CLCPA defines "renewable energy system" as "systems that generate electricity or thermal energy through use of the following technologies: solar thermal, photovoltaics, on land and offshore wind, hydroelectric, geothermal electric, geothermal ground source heat, tidal energy, wave energy, ocean thermal, and fuel cells which do not utilize a fossil fuel resource in the process of generating electricity."

ADDITIONAL TIER 1 ELIGIBILITY REQUIREMENTS1. Retail Sale Requirement

For electricity to be eligible for Tier 1 RECs, it must be demonstrated to the satisfaction of the Commission or its designee that the electrical output of the eligible generation facility commencing operation after January 1, 2015, either originated in New York State or was contractually delivered into New York State, and was sold to consumers in New York State in a retail sale.

2. Locational/Delivery Requirement

For electricity and the associated RECs to be eligible for Tier 1, it must be demonstrated to the satisfaction of the Commission or its designee that the electrical output of the generation facility was: 1) scheduled into a market administered by the New York Independent System Operator, Inc. (NYISO) for end-use in New York State; 2) delivered through a wholesale meter under the control of a utility, public authority, or municipal electric company such that it can be measured, and such that consumption within New York State can be tracked and verified by such entity or by the NYISO; or 3) delivered through a facility dedicated generation meter, which shall be approved by and subject to independent verification by DPS Staff or its designee, to a customer in New York State whose electricity was obtained through the NYISO/utility system. For any facility seeking to satisfy the electricity delivery requirement through options 2 or 3 above, all costs associated with measurement, tracking, and verification, to the satisfaction of DPS Staff or its designee, and for participation in NYGATS, shall be borne by the facility owner/developer.

For renewable generators located in a control area adjacent to the NYISO, the electricity associated with the RECs must be scheduled, transmitted, delivered, and settled in the NYISO energy market in each hour, and must be accompanied with documentation of a unit-specific contract path between the injection point in the control area of origin to the delivery point in New York. The documentation must include the provision of transmission rights for delivering the generation via NYISO using the North American Electric Reliability Corporation (NERC) tag fields Sending and Receiving Control Areas and Purchasing/Selling Entity Name and Number. For imported RECs to be flagged as eligible for Tier 1, projects located in an adjacent control area will need to continuously demonstrate the delivery of energy and RECs into New York State through the requirements laid out in the Final Phase 1 Implementation Plan. Tier 1 eligible energy scheduled and delivered from external control areas must be accompanied by the NERC tag information from an outside organization such as the Open Access Technology International (OATI) System identifying the importing project as the source for the scheduled and transmitted electricity into the New York Control Area (NYCA). NYSERDA uses the information from OATI or a similar system to ensure compliance with the Final Phase 1 Implementation Plan.

3. Bilateral Sales

Bilateral sales for electricity associated with the electricity produced by an eligible facility are permissible provided that the seller of electricity from an eligible facility can demonstrate that the purchaser of the electricity is a New York State Load Serving Entity (LSE), or one or more New York State end-users.

TIER 4 REQUIREMENTS1. Eligibility

Eligible projects would include any "renewable energy system" as defined by the CLCPA (including generation paired with storage) except for: (1) hydropower generation from new impoundments not already in existence or under construction as of June 18, 2020; and (2) offshore wind energy systems. All non-hydropower projects must have a commercial operation date on or after October 15, 2020.

All Tier 4 hydropower projects will have two additional requirements: (1) a supplier energy baseline requirement; and (2) a supplier Greenhouse Gas (GHG) baseline requirement. With respect to the Supplier Energy Baseline, NYSERDA shall negotiate terms with a selected project or portfolio of projects that result in a Supplier Energy Baseline tailored to the unique circumstances of the supplier. These terms will be subject to the Commission's review and approval. Regarding the Supplier GHG Baseline, Tier 4 RECs shall only be compensated so long as the associated energy represents a net increase in the supplier's total hydropower generation as compared to a historic baseline. Tier 4 applicants are required to provide the historic renewable energy delivered to the New York Control Area (not less than 20 years), historic generation baseline of average annual hydropower production (not less than 20 years) with the corresponding water flows as measured by U.S. Geological Survey gauges or best available data sources, capacity additions, and other pertinent information that NYSERDA may request. NYSERDA and Staff shall utilize this information to determine the appropriate baselines for each supplier.

All Tier 4 projects must: (1) provide detailed historical data necessary to determine the supplier energy

baseline and supplier GHG baseline; and (2) consent to the use of any tracking system and/or auditing regime that may be necessary to verify continued compliance with the delivery and additionality requirements over the contract performance.

2. Delivery

In addition to the locational and delivery requirement required for Tier 1, Tier 4 projects must be either located in Zone J or delivered through new transmission into Zone J. A transmission interconnection will be considered new for purposes of Tier 4 if it electrically interconnects after October 15, 2020.

CES REPORTING

Item	Type	Public	Frequency	Due Date	Purpose/ Implications
Open NY Reporting	Report	Yes	Quarterly		Indicates procurement results, contract status, potential supply of RECs and status of contracted baseline renewables
CES Financial Status Report	Report	Yes	Annual	Last Business day of March	ACP Disposition
Annual RES Compliance Report	Report	No	Annual	Last Business day of September	Summary data on how LSEs met Tier 1 obligation
Annual CES Compliance Report	Report	No	Annual	Last Business day of September	Summary data on how LSEs met OREC, Tier 2, Tier 4 obligations
Annual ZEC Compliance Report	Report	No	Annual	Last Business day of October	Summary data on how LSEs met ZEC obligation
Tier 1 REC and ACP Prices for upcoming CY	Filing, Other	Yes	Annual	Last Business day of December	Set Tier 1 REC price by vintage
CES Progress Report	Report	Yes	Annual	Last Business day of January	Progress towards overall 70 by 30 goal
Divergence Test and Target Setting	Petition	Yes	Annual	Last Business day of September	Assess supply-demand balance; Set next year for LSE obligations and targets
Build-Ready Report	Report	Yes	Annual	First Business Day of April	

Item	Type	Public	Frequency	Due Date	Purpose/ Implications
NYSERDA Administrative Funds (quarterly)	Report	Yes	Quarterly	Due 45 Days after end of each quarter	
CES Administrative Funding Petition	Petition	Yes	Annual	Last Business day of July	
CES Biennial Program Review	Petition	Yes	Biennial	No later than July 1, 2024	Comprehensive review of the program

State Environmental Quality Review Act

FINDINGS STATEMENT

October 15, 2020

Pursuant to Article 8 (State Environmental Quality Review Act (SEQRA)) of the Environmental Conservation Law and 6 New York Codes, Rules and Regulations (NYCRR) Part 617, the New York State Public Service Commission (Commission), as Lead Agency, makes the following findings.

Name of Action: Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and a Clean Energy Standard (15-E-0302)

SEQRA Classification: Unlisted Action

Location: New York State/Statewide

Date Final Supplemental Generic Environmental Impact Statement (SGEIS) Filed: September 17, 2020

Final SGEIS available at: <http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=15-E-0302>

I. PURPOSE AND DESCRIPTION OF THE ACTION

In the attached order, the Public Service Commission (Commission) adopts an increase in the State's clean energy goal from 50% renewables to 70% renewables by 2030, and an increase in the offshore wind procurement goal from 2,400 MW by 2030 to 9,000 MW by 2035. In addition, the Commission adopts a number of changes to the Clean Energy Standard (CES) to enable the achievement of these new renewable energy targets.

The CLCPA complements a number of New York State policies over the past several years that have established goals

aimed at substantially increasing the use of renewables and reducing greenhouse gas (GHG) emissions. In May 2014, the Commission established two major policy initiatives: Reforming the Energy Vision (REV) and the Clean Energy Fund (CEF). The Commission prepared a Generic Environmental Impact Statement (2015 GEIS), pursuant to the New York State Environmental Quality Review Act (SEQRA), to explore the potential environmental impacts associated with the initiatives. The Commission subsequently adopted the REV Framework Order on February 26, 2015, the CEF Order on January 21, 2016, and the REV Track Two Order on May 19, 2016.

In May 2016, the Commission published a Supplemental EIS (2016 SEIS) that analyzed the potential environmental impacts associated with a requirement that 50% of all electricity consumed in New York by 2030 be supplied by renewable resources (the 50 by 30 goal) and establishment of a support mechanism to sustain operations of eligible nuclear facilities. In August 2016, the Commission adopted the CES, which provides the regulatory mechanisms needed to achieve the 50 by 30 goal.

In June 2018, the Commission published a Generic EIS in response to a New York State Energy Research and Development Authority (NYSERDA) report providing options to procure offshore wind energy (2018 GEIS). In July 2018, the Commission adopted an offshore wind procurement goal of 2,400 megawatts (MW) by 2030 (2018 OSW Order). NYSERDA's first offshore wind solicitation, issued in November 2018, garnered a competitive market response.

According to a NYSERDA petition filed on January 28, 2020, a second statewide solicitation in 2020 has the potential to result in a near-term total procurement of offshore wind capacity beyond the 2,400 MW analyzed in the 2018 GEIS. In

January 2020, the New York State Department of Public Service (DPS) prepared a Supplemental Generic EIS (2020 SGEIS) in response to the petition. The SGEIS analyzed the potential environmental impacts associated with the State's procurement of an additional 1,800 MW of offshore wind in the near term, in addition to the previously evaluated 2,400 MW evaluated in the 2018 GEIS. The Commission published the final 2020 SGEIS in April 2020.

On June 18, 2020, the DPS and NYSERDA filed a White Paper titled "Clean Energy Standard Procurements to Implement New York's Climate Leadership and Community Protection Act," detailing recommendations on how the accelerated and expanded renewable energy procurement mandates of the CLCPA could be accomplished, primarily through the modification of the CES to reflect the new clean energy targets. The White Paper does not propose a particular generation facility or site, but rather provides the rationale and justification for additional procurements of renewable resources through various program modifications. The White Paper also includes an analysis of the costs and benefits of the incremental Tier 1 and offshore wind procurements. The White Paper proposes a Tier 4 program that could result in procurement of up to 3,000 MW of renewable energy sources delivered to New York City, including hydropower. Further, the White Paper proposes a Great Lakes Wind Feasibility Study.

The Supplemental GEIS (SGEIS) builds upon and incorporates by reference relevant material from the 2020 SGEIS, 2018 GEIS, 2016 SEIS, and 2015 GEIS (collectively, Prior SEQRA Analyses). The SGEIS considers, in general and conceptual terms, the effects of the Proposed Action. The Proposed Action under consideration is a continuation of the previous initiatives discussed above and analyzed under SEQRA, in

addition to the increase in resources needed for implementation of the following CLCPA requirements:

- 70% of electricity from renewable energy by 2030
- 9,000 MW of offshore wind electricity by 2035
- 6,000 MW of distributed photovoltaic solar generation

II. **FACTS AND CONCLUSIONS RELIED UPON**

In developing this findings statement, the Commission has reviewed the Final SGEIS issued on September 17, 2020. The following findings are based on the facts and conclusions set forth in the Final SGEIS, which incorporates by reference material from the Prior SEQRA Analyses as discussed below.

A. **Public Need and Benefits**

The SGEIS incorporates by reference the description of public benefits as required by 6 NYCRR § 617.9(b)(5)(i) that may result from the increase in the State's clean energy goal from 50% renewables to 70% renewables by 2030, procurement of an additional 4,800 MW of offshore wind by 2035, and procurement of an additional 3,000 MW of distributed solar energy by 2025. Depending on the site- or location-specific aspects of large-scale renewable and distributed solar development that results from the Proposed Action, and considering NYSERDA's White Paper, increasing the supply of large-scale renewable energy and distributed generation is expected to result in the following public benefits:

- **Public health benefits.** Additional renewable energy sources would increase expected net carbon and health benefits beyond those identified in the 2015 GEIS and 2016 SEIS. An additional 4,800 MW of offshore wind would increase expected net carbon and health benefits beyond those identified in the 2018 SEIS and 2020 SGEIS. The White Paper estimated \$7.7 billion in potential net carbon benefits from the reduction in carbon dioxide (CO₂) based on development of 3,000 MW of distributed solar, 10,025 MW of

utility-scale solar, and 1,785 MW of utility-scale onshore wind by 2030. The offshore wind procurement goal of 9,000 MW would avoid 15.3 million short tons of carbon, which would equal approximately \$9.6 billion in net carbon benefits over the lifetime of the project.

- **Economic development benefits.** The Proposed Action would be expected to result in an increase in the number of jobs related to renewable energy generation. In 2018, the State employed 22,023 people in renewable energy generation, with 11,603 employed in the solar energy and 3,491 employed in wind energy. The Proposed Action would increase the anticipated need for renewable energy support services (primarily repair and maintenance, administrative support, and facilities management), sales and distribution, and professional support services. Studies have generally found that renewable energy deployment increases gross jobs in and related to the renewable energy sector.
- **Other benefits.** The Proposed Action could result in a number of other program benefits from large-scale renewable resources and distributed generation, including:
 - Reduced Transmission and Distribution Losses - An increase in distributed solar near load is expected to result in a reduction in line losses.
 - Optimized Electricity Network - Distributed solar could allow for better optimization of generation systems and the transmission and distribution network.
 - Reduced or Avoided Transmission and Distribution Infrastructure - Decentralization of the State's electricity system could reduce the need for expanded grid capacity.
 - Reduced Congestion Costs - Locating renewable energy generation near congested areas can alleviate the transmission and distribution constraints causing congestion and associated costs.
 - Increased Reliability and Power Quality - Locating renewable energy generation near the load may result in more reliable transmission, distribution, and generation, fewer power interruption events, and faster facility repairs following extreme weather events.

B. Potential Impacts

The scope of the SGEIS addresses issues either not addressed in the Prior SEQRA Analyses or issues that need

further analysis based on the expansion of the State's renewable energy goals pursuant to the CLCPA. Specifically, the SGEIS considered the following factors when determining which resource areas required new or further analysis: changes in the type of renewable resources, increases in scale of development, and new information (e.g., previously unknown impacts on a threatened or endangered species, or technology change of large-scale renewable resource and distributed solar generation).

- Utility-scale solar - The Prior SEQRA Analyses evaluated utility-scale solar and identified potential adverse impacts on land use, visual resources, and birds and bats. State and local communities have become increasingly sensitive to issues such as potential loss of habitat for grassland birds, as well as loss of agricultural land. The SGEIS analyzes the effects of additional utility-scale solar on these resources and considers potential impacts on grassland birds.
- Great Lakes offshore wind - The 2016 SEIS provided some general discussion of potential impacts of offshore wind in the Great Lakes; however, Great Lakes offshore wind was not addressed in the 2020 SGEIS. Consistent with 6 NYCRR §617.6(a), an initial review of the Proposed Action identified the following resource areas as warranting further analysis in the SGEIS: (1) visual resources; (2) sensory disturbance to fish; (3) conflict with use of space for commercial and recreational vessels; and (4) displacement, disturbance, or loss of habitat and mortality/injury to birds and bats.
- Hydropower - Hydropower is expected to contribute to the 70 by 30 goals as part of the White Paper's proposed Tier 4 program that would incentivize up to 3,000 MW of renewable capacity. Hydropower generation would be eligible so long as the associated energy does not involve new impoundments and is shown to be additional to the supplier's baseline production of renewable energy. The Prior SEQRA Analyses generally discussed impacts from new impoundments, up-grades to existing facilities, and conversion of non-powered dams. The SGEIS considers the general impacts from additional hydropower upgrades and low-impact run-of-river projects.
- North Atlantic and Mid-Atlantic Offshore Wind - The 2020 SGEIS concluded that the resources for which potential unavoidable

adverse impacts from offshore wind may occur and, therefore, potential cumulative impacts could occur, include: (1) displacement, disturbance, or loss of habitat for marine mammals and sea turtles; (2) sensory disturbance to fish; (3) conflict with use of space for commercial and recreational vessels; and (4) displacement, disturbance, or loss of habitat and mortality/injury to birds. Therefore, the SGEIS considers the effects of the additional development of approximately 4,800 MW of offshore wind on these resource areas.

- Distributed Solar - Distributed solar was addressed in both the 2015 GEIS and 2016 SEIS, including impacts on land use, visual resources, and birds were considered. The SGEIS considers the effects of the additional development of approximately 3,000 MW of distributed solar on land use, visual resources, and birds.

Consistent with 6 NYCRR §617.6(a), an initial review of the Proposed Action determined the following renewable energy resources analyzed in the Prior SEQRA Analyses would not experience a change in type or scale of impacts of: onshore wind, geothermal energy, and ocean energy. These renewable resources continue to not result in potential significant adverse effect from the change in type or scale of impacts associated with the additional expected renewable resources, and therefore are not analyzed further in the SGEIS.

Utility-Scale Solar Energy

The contribution of utility-scale solar energy is projected to be in the range of 3,271 and 8,110 MWs. The primary impacts from utility-scale solar continue to be impacts on land use, visual resources, and birds. The SGEIS analyzed the effects of additional utility-scale solar on these resources and considers potential impacts on grassland birds.

Land Use

The additional development of utility-scale solar would result in some minor impacts on land use, including

conversion of farmland. As described in Chapter 3 of the SGEIS, approximately 6.1 million acres in New York are cultivated crop and pastureland. Assuming 5 acres per MW of utility-scale solar capacity, land requirements for the expansion of the 50 by 30 goal to 70 by 30 using additional utility-scale solar represent approximately 0.2 to 0.5% of the state's cropland and pastureland.

As described in the Prior SEQRA Analyses and Chapter 4 of the SGEIS, policies for agricultural land protection, including agricultural districts, and guidelines for mitigation of construction impacts on agricultural land, would avoid, minimize, and mitigate some potential impacts associated with construction and operation of utility-scale solar development. Given the minor conversion of land compared to available crop and pastureland, project-specific agency guidelines, and restoration following decommissioning, significant adverse impacts on land use and land cover would not be expected from incremental utility-scale solar development.

Visual Resources

The additional utility-scale solar would result in some additional spatial area in which a contrast between solar facilities and the surrounding landscape occurs depending on the selected design, topography, existing vegetation, screening, and individual sensitivity. Use of safety lighting at substations and operations infrastructure would be visible nearby. Siting of utility-scale solar would generally avoid or minimize visual impacts on high density population centers, and screening provided by vegetation and topography would limit visibility to nearby areas. Photo-voltaic modules are specifically designed to reduce reflection to maximize the amount of light converted into electricity and visual impacts from glare would be

negligible. Permitting of utility-scale solar requires consideration of visual impacts and measures, such as landscaping or non-reflective materials, to avoid, minimize, and mitigate impacts on visual resources. Given the project-specific agency consultations, the Proposed Action would not be expected to result in significant adverse impacts on visual resources from additional utility-scale solar projects.

Birds

The increase in utility-scale solar developed under the Proposed Action would result in impacts on some bird species from increased noise, human presence, habitat loss and disturbance of vegetation communities due to site preparation including clearing and tree removal. The increase in vegetation removal from construction of utility-scale solar projects would result in conversion from agricultural land that may be considered grassland habitat to maintained vegetation, displacing individuals from some avian species from migrating, breeding, foraging, and nesting areas. Loss of habitat would displace individuals of some species to other nearby areas with suitable habitat, resulting in increased competition in the nearby habitat. Construction would also result in some partial removal of forested area, removing areas of cover from predators, foraging opportunities, and shelter.

Land requirements of additional utility-scale solar, assuming 5 acres per MW capacity, would represent only 0.8 to 2.3% of the approximately 1.4 million acres of suitable nesting habitat within the state's grassland focus areas even if all additional utility-scale solar were conservatively assumed to be constructed there.

Potential effects of construction noise on birds include changes in physiology (e.g., stress, reproductive

hormone levels) and behavior (e.g., avoidance, foraging, vocalization, attention). However, studies indicate bird populations can rebound very shortly after even large-scale, extremely noisy events. Given the short-term noise exposure; the potential impacts due to construction noise from utility-scale solar projects would be temporary and negligible.

Impacts on birds would occur at an individual level, however, population level impacts would not be expected to occur for any species. Given the minor conversion of land compared to available grassland areas, the available habitat for relocation, and project-specific agency consultations, significant adverse impacts on grassland birds would not be expected.

Great Lakes Offshore Wind Energy

The potential contribution of Great Lakes offshore wind to the 70 by 30 goal is currently unspecified and as discussed above, NYSERDA's White Paper proposes a Great Lakes Wind Feasibility Study. The SGEIS considers the effects of development of offshore wind in the Great Lakes on visual resources, fish, commercial and recreational fishing, and birds and bats.

Visual Resources

Offshore wind energy would affect visual resources along the coast of Lake Erie and Lake Ontario; however, impacts would be dependent on the viewshed and individual sensitivity to changes in the viewshed, and could be minimized with careful siting.

As discussed in Section 2.3.3 of the SGEIS, offshore wind turbines in New York's Great Lakes waters are expected to be similar in height and capacity to onshore turbines, and offshore turbines would generally be within 10 miles (16

kilometers) of the Lake Erie shore and within 1 to 2 miles (2 to 3 kilometers) of the Lake Ontario shore. The Prior SEQRA Analyses indicated that offshore wind energy would be difficult to see starting at 20 miles (32 kilometers) from shore due to the curvature of the earth and atmospheric conditions. Small offshore wind facilities less than 9 miles (14 kilometers) from shore in a range of weather conditions would generally be a focus of visual attention.

Given the limited spatial area for development of offshore wind in the Great Lakes, and number of sensitive viewsheds along the lakes, wind development would likely be a major focus of visual attention of individuals on and offshore. Avoidance of sensitive viewsheds and considerations on the number and height of turbines would minimize impacts on visual resources. However, the potential for visual impacts may not be entirely unavoidable.

Fish

Impacts on fish in the Great Lakes would occur from the temporary increase of suspended sediments, noise, and other sensory disturbances from pile driving, excavating, and increased vessel traffic associated with construction. The development of offshore wind capacity in the Great Lakes would result in minor temporary increase of noise and other sensory disturbances from pile driving, excavating, and increased vessel traffic associated with construction, or no additional impacts depending on the selected wind facility design (e.g., turbine size and spacing).

A 2011 study indicates freshwater fish species in the Great Lakes have higher tolerances to suspension rates of sediment than marine pelagic fish species. Most fish species would be expected to temporarily relocate to surrounding areas

and experience disturbances less frequently or of lower magnitude. If egg and larval fish are present at proposed turbine sites they may not be able to avoid noise impacts or direct impacts on the lakebed. After turbine installation, displaced fish species are likely to return to the area, but the rate of recolonization is poorly understood. Monitoring studies in the Great Lakes have shown that recolonization rates can range from months to years. The spatial distribution of offshore wind projects in the Great Lakes and time of year restrictions would avoid or minimize impacts on fish. Alternative turbine anchoring systems, specifically gravity-based foundations, may substantially reduce the amount of pile driving and associated noise-related disturbance during turbine installation. Given available habitat, potential reductions in pile driving, and project-specific agency consultations, significant adverse impacts on fish in the Great Lakes would not be expected.

Commercial and Recreational Fishing

Potential impacts on commercial and recreational fishing in the Great Lakes would result from area-use conflicts that would result in the displacement of commercial and recreational vessels from fishing grounds, and/or displacement of fish from fishing grounds. Offshore wind energy may limit certain fishing practices, restrict access to fish, or displace fish from traditional fishing areas. To avoid the potential risks associated with fishing within or near offshore wind energy, commercial and recreational fishers may choose to travel farther than they would otherwise, which would increase fuel costs, and potentially reduce the number of landings and catch due to a more limited fishing timeframe. Fish may also

temporarily avoid construction areas, which may temporarily alter typical fish catch.

A 2014 study indicates sufficient spacing of turbines would allow vessels to navigate around turbines while also maintaining safe distance from other vessels and commercial shipping lanes. Offshore wind energy development may also lead to the conversion of open water to an artificial reef-like habitat. A 2010 NYSERDA study indicates added structures (i.e. turbine foundations) would create a new hard-bottom habitat similar to an artificial reef, which could cause a shift in species presence and diversity. The development of new wind capacity would minimize significant adverse impacts on commercial and recreational fisheries in the Great Lakes environment. However, the potential for impacts on commercial and recreational fisheries may not be entirely unavoidable.

Birds and Bats

Development of offshore wind in the Great Lakes would result in potential offshore impacts on birds and bats from construction and operation of offshore wind including disturbance and displacement due to noise, human presence, vessel traffic, and the presence of newly introduced large structures. Development of wind turbines in the Great Lakes under the Proposed Action would result in direct impacts on birds and bats through collisions with turbines. Many species of birds migrate through the Great Lakes region during spring and fall migrations. However, some land-based species of birds may see the Great Lakes as a geographic obstacle and avoid flying over large bodies of water. A 2018 study indicates that those species that do cross open water typically fly at higher altitudes (mean elevation 188 meters to 644 meters), often above the height of turbine blades, which are expected to be shorter

compared to ocean-based wind. Because of the tendency of some bird species to avoid flying over large bodies of water, there are several areas along the eastern shores of Lake Erie and Lake Ontario that are important stop-over sites for migratory birds; many of these areas are designated as Audubon Important Bird Areas. Birds and bats may also be attracted to wind turbines and platforms as potential structures to perch or roost, and upward facing lighting could attract nocturnally migrating birds; this would potentially result in collisions with turbines. Minimization of lighting and use of colors in lighting that is less attractive to birds would potentially reduce the number of bird collisions. According to a 2018 and 2014 study, adjusting the pitch of turbine blades and slowing the rotation of turbines at lower wind speeds during summer months would reduce the number of bat collisions.

The potential for new offshore wind development in the Great Lakes, could result in an increase in displacement of birds, essentially resulting in habitat loss. As discussed in Chapter 4 of the SGEIS, regulatory consultations and preconstruction siting studies would ensure that projects avoid areas of known dense avian use. Impacts on birds would occur at an individual level, however, population-level impacts would not be expected to occur for any species. Given the limited spatial area for development of offshore wind in the Great Lakes, siting of specific projects would require careful avoidance, minimization, and mitigation measures.

North Atlantic and Mid-Atlantic Offshore Wind Energy

The SGEIS considers the effects of the procurement of an additional 4,800 MW of offshore wind on marine mammals and sea turtles, fish, commercial and recreational fishing, and birds. Impacts on fish would occur from the temporary increase

of suspended sediments, noise, and other sensory disturbances from pile driving, excavating, and increased vessel traffic associated with construction. The additional 4,800 MW of offshore wind would result in an additional temporary increase of noise and other sensory disturbances from pile driving, excavating, and increased vessel traffic associated with construction, depending on the selected wind facility design. Pile driving for additional foundations would occur in isolated areas during a temporary timeframe. As discussed in the Prior SEQRA Analyses, anticipated advancements in turbine anchoring systems would substantially reduce the amount of pile driving and associated noise impacts.

Potential impacts on commercial and recreational fishing would result from area-use conflicts that would result in the displacement of commercial and recreational vessels from fishing grounds, or displacement of fish from fishing grounds. The procurement of an additional 4,800 MW of offshore wind would result in additional impacts on commercial and recreational fishing. Assuming all of the additional 4,800 MW of offshore wind is sited within the geographic scope of analysis of the Master Plan, the scale-up would represent a total of approximately 3% of the area offshore of New York, leaving the area largely available without conflicts for fishing.

Potential impacts on birds from construction and operation of offshore wind include disturbance and displacement due to noise, human presence, vessel traffic, and the presence of newly introduced large structures. Impacts would also occur to individual birds and bats from direct collision with construction cranes and turbines. The procurement of an additional 4,800 MW of offshore wind would result in an increase in displacement of birds, essentially resulting in habitat loss. The overall spatial coverage of an additional 4,800 MW of

offshore wind energy development relative to the potential impact area distributed across the marine environment would not significantly reduce or modify avian habitat.

All potential impacts on marine mammals and sea turtles, fish, commercial and recreational fisheries, and birds as discussed in the Prior SEQRA Analyses would occur under the Proposed Action, as would the avoidance, minimization, and mitigation measures previously described. Given the spatial distribution of offshore wind projects, the available habitat in the marine environment, and agency consultations; significant adverse impacts on marine mammals and sea turtles, fish, commercial and recreational fisheries, and birds would not be expected.

Distributed Solar Energy

The SGEIS considers the effects of an additional 6,000 MW of distributed solar on land use and visual resources. In addition, this analysis considers potential impacts on avian species, particularly grassland birds.

Land Use

The estimated increase in the development of distributed solar would result in an increase in the temporary and permanent conversion of land area. Distributed rooftop solar would be located on existing structures and would not result in a temporary or permanent conversion of land use or land cover. Community solar projects, which are between 1-2 MW, share physical characteristics with large scale utility solar; they are commonly developed in rural areas, including agricultural land, and are typically ground mounted. Former brownfield and closed landfills may also provide suitable sites for community solar projects. Based on projections from

NYSERDA, approximately half of the 6,000 MW of distributed solar in 2030 is expected to be community solar. Assuming 6 acres per MW are needed for a typical 1 MW community solar facility, the land area needed for 3,000 MW of community-distributed solar would represent 0.3% of the state's cropland, assuming only cropland and pastureland was used for community solar.

As described in the Prior SEQRA Analyses and Chapter 4 of the SGEIS, policies for agricultural land protection, including agricultural districts and guidelines for mitigation of construction impacts on agricultural land, would avoid, minimize, and mitigate some potential impacts associated with construction and operation of community solar development. With the availability of suitable land for development of distributed solar in New York, project-specific agency guidelines, and the potential to restore land to its previous land use following decommissioning, significant adverse impacts on land use and land cover would not be expected from the additional procurement of distributed solar under the Proposed Action.

Visual Resources

Distributed solar would result in impacts on visual resources from mechanical equipment that contrasts with surrounding landscape. These impacts on visual resources would vary depending on the type of distributed solar developed.

Rooftop solar projects would generally blend in with existing landscapes and not result in significantly new contrasts. Design considerations, such as symmetrical layouts, can minimize visual impacts of rooftop solar when viewed from nearby. Alternatives to traditional rack-mounted solar panels, such as those that resemble roof shingles, are becoming more readily available and would further minimize visual contrasts. Community solar projects may be built on undeveloped land or

open space which would result in a contrast with the existing landscape. Glare from rooftop solar or community solar projects may occur, but as discussed in Section 5.2.1 of the SGEIS, photovoltaic modules are designed to reduce reflection to maximize the amount of light converted into electricity. Given the variation in site-specific conditions and avoidance and minimization measures, the procurement of additional distributed solar energy would not be expected to result in significant adverse impacts on visual resources.

Birds

Rooftop solar has negligible impacts on wildlife because solar panels are affixed to existing structures and would not result in a loss of bird habitat. Community solar projects may result in similar potential impacts on birds from utility-scale solar development including the loss or fragmenting of habitat, disrupting natural behaviors such as foraging, hunting, and migration patterns; and introducing barriers to the movement of species. These impacts depend on the size and type of the solar projects as well as proximity to sensitive species. In addition, development of community solar under the Proposed Action may result in impacts on grassland birds.

The impacts on birds from community solar would be similar to utility-scale solar as discussed in Section 5.2.3 and smaller in scale. Land requirements of additional community solar represents approximately 1.3% of the approximately 1.7 million acres of suitable nesting habitat, such as grasslands and hayfields, within the state's grassland focus areas, assuming 6 acres per MW of capacity. Impacts on birds would occur at an individual level; however, population level impacts would not be expected to occur for any species. Given the minor

conversion of land compared to available grassland areas, the available habitat for relocation, and project-specific agency consultations, significant adverse impacts on grassland birds would not be expected.

Hydropower

The Prior SEQRA Analyses evaluated general impacts from new hydropower facilities, upgrades to existing facilities, and conversion of NPDs. Long-term water quality impacts and methane emissions released from decomposing organic materials are associated primarily with the construction and operation of new impoundments; however, new impoundments would not be eligible under Tier 4. The SGEIS analyzes the general impacts of additional hydropower from upgrades to existing facilities and low-impact run of river projects that would be eligible under the proposed Tier 4.

Upgrades to existing projects could include replacing older, less efficient generators with new generators, adding additional generators at an existing powerhouse to increase hydraulic capacity at projects with high spill flows, or adding turbines to capture energy from minimum flow releases. The magnitude of impacts would vary according to the project location and other site-specific characteristics. Replacement of existing equipment would have few if any impacts, while some tree clearing and in-water work could be required for addition of new equipment to an existing facility.

Construction impacts for both upgrades and run-of-river projects would generally be limited to the construction footprint and any areas of temporary disturbance associated with temporary construction access roads or grading. Construction activities could include vegetation removal, grading, excavation, and equipment installation. Loss of habitat could

displace individuals of some sensitive animal species to other nearby areas with suitable habitat, resulting in increased competition in the nearby habitat; however, this loss would be small and proportional to the size of new generators and equipment. As described in the Prior SEQRA Analyses and Chapter 4 of the SGEIS, measures to avoid, minimize, and mitigate some potential impacts applicable to construction of hydropower development include implementation of sediment and erosion control plans; spatial and temporal avoidance measures including seasonal restrictions on vegetation clearing to limit effects on sensitive species; vegetation restoration plans to restore areas temporarily disturbed during construction; and monitoring plans to minimize effects of invasive species and water quality impairments.

Impacts on invertebrates and fish could occur from the temporary dewatering of stream reaches, increases in turbidity, and noise associated with construction of coffer dams that could be needed for replacement or addition of turbines. Implementation of sediment and erosion control plans would minimize these effects on downstream resources. Noise associated with underwater construction could displace fish in the immediate area to adjacent habitat, leading to temporary increases in competition.

Impacts on invertebrates and fish would occur at an individual level; however, population level impacts would not be expected to occur for any species. Given the potential for mitigation and project-specific agency consultations, significant adverse impacts on fish from Tier 4 eligible hydropower project would not be expected.

Cumulative Impacts

The SGEIS identifies potential cumulative impacts where such impacts may be "applicable and significant." Cumulative impacts can result from individually minor but collectively significant actions that take place over time. Based on the prior analysis, potential unavoidable adverse impacts may occur and, therefore, potential cumulative impacts may occur for land use, visual, and grassland birds.

Land Use

Cumulative impacts may occur on land use and land cover from the temporary and permanent conversion of existing land use and land cover from development of utility-scale solar energy and distributed solar. The cumulative effect of development of the utility-scale solar energy and distributed solar resources under the Proposed Action would require between approximately 28,500 and 49,500 acres of land. This would represent a cumulative use of approximately 0.5 to 0.8% of the state's cropland and pastureland cover. The cumulative effect of development of utility-scale solar could result in removal of forested land. Given the availability of land area within the state, measures to avoid or minimize permanent impacts on agricultural land and forested areas, and agency consultations, significant adverse cumulative impacts on land use would not be expected.

Visual

Cumulative impacts may occur on visual resources from mechanical equipment that contrasts with surrounding landscape from development of offshore wind. Cumulative impacts on visual resources would depend on the selected design, topography, existing vegetation, screening, and individual sensitivity. Communities hosting multiple offshore wind projects could

experience cumulative visual impacts due to the long distance at which these projects may be seen. Given the limited spatial area suitable for development of offshore wind in the Great Lakes, and the long distances at which wind turbines can be seen, careful consideration of siting, including avoidance of sensitive viewsheds and considerations on the number and height of turbines, would be needed to avoid cumulative impacts on visual resources. With implementation of measures to avoid or minimize permanent impacts on visual resources, and agency consultations, significant adverse cumulative impacts on visual resources would not be expected.

Grassland Birds

Cumulative impacts may occur on grassland birds from the removal or fragmentation of habitat, or collision from development of utility-scale solar energy and distributed solar. The cumulative effect of development of the large-scale renewable energy and distributed solar resources under the Proposed Action would require approximately 28,500 and 49,500 acres of land. This would represent approximately 2.1 to 3.6% of the suitable habitat for grassland birds within the state's grassland focus areas assuming all solar energy projects locate in grassland bird habitat. As noted in Chapter 4 of the SGEIS, BMPs would generally minimize impacts in areas of grassland habitat. Impacts on birds would occur at an individual level and are not expected to occur at a population level. With implementation of measures to avoid or minimize permanent impacts on grass-land birds, and agency consultations, significant adverse cumulative impacts on grassland birds would not be expected.

C. Mitigation of Potential Adverse Impacts

Consistent with 6 NYCRR §§617.9(b)(5)(iv) and 617.11(d)(5) of SEQRA, the SGEIS identifies federal and State regulations that will help ensure, to the maximum extent practicable, avoidance, minimization, or mitigation of adverse environmental impacts that may occur due to the Proposed Action's procurement of offshore wind energy. The SGEIS incorporates by reference material from the Prior SEQRA Analyses and provides relevant updates to federal and state regulations and guidance concerning offshore wind development activities, as well as updates related to avoidance, minimization, and mitigation strategies.

As described in the Prior SEQRA Analyses, large-scale renewable energy projects are subject to review and decision-making by federal and state agencies. Renewable energy developers will be expected to adhere to these project-specific and site-specific regulations and permitting processes. Site-specific characteristics and project-specific details will ultimately determine the regulations that will apply to each potential development.

The Accelerated Renewable Energy Growth and Community Benefit Act was passed as part of the fiscal year 2020-2021 state budget and will create a first in the nation Office of Renewable Energy Siting to improve and streamline the process for environmentally responsible siting of large-scale renewable energy projects. Renewable energy projects greater than 25 MW will continue to be sited through the Article 10 process until the Office of Renewable Energy Siting establishes the new siting standards.

NYSERDA has developed a unified solar permit that has been adopted by nearly 350 communities to streamline the permitting process for solar systems that are 25 kilowatts or less. Community solar projects are typically around 2 MW and

are generally assessed in accordance with SEQRA and are potentially subject to the same federal and state regulations as the utility-scale solar projects identified in the Prior SEQRA Analyses. Offshore wind projects located in New York State jurisdictional waters, including Lake Erie and Lake Ontario, would be subject to SEQRA or Article 10 of the Public Services Law, which provides for siting review of major electric generating facilities of 25 MW. In addition to requirements identified in Exhibit 4-1 in the 2020 SGEIS, offshore wind in the Great Lakes could also be subject to Boundary Water Treaty approval from the International Joint Commission and U.S. Army Corps of Engineers permits under Section 408 as well as Section 401 of the Clean Water Act.

The required avoidance, minimization, and mitigation of potential environmental impacts from future renewable energy development would occur on a project-specific basis as part of the permitting process for each project. Since the Prior SEQRA Analyses, local, state, regional, and federal agencies continue to identify and develop additional measures to avoid, minimize, and mitigate potential adverse impacts from development of renewable energy. These efforts inform current and future guidance, regulations, contracts, and agreements to implement additional suitable measures, as described below. Under the Proposed Action, the new and previously identified measures would be suitably implemented on a project-specific basis, as required by the necessary state and federal permits and authorizations, in accordance with federal and state laws and regulations. Such measures may be supplemented by non-regulatory initiatives aimed at enhancing developer and stakeholder collaboration to identify and incorporate less impactful approaches to offshore wind facility design, construction, and operation.

D. Alternatives Considered

The primary alternative is the No Action alternative. Under this alternative, the State would still take actions to achieve the 50 by 30 goal outlined in the CES by employing a variety of resources in the renewable generation portfolio; procure 4,200 MW of offshore wind in the near-term; and procure 3,000 MW of distributed solar by 2023. However, under the No Action alternative, the State would not take actions needed to achieve the 70 by 30 goal, would not procure the additional approximately 4,800 MW of offshore wind capacity by 2035, and would not procure the additional 3,000 MW of distributed solar by 2025 and 6,000 MW of distributed solar by 2030. Instead, the State would continue to pursue its 50 by 30 goal and procurement would be limited in the near term. The No Action alternative may result in less potential development of renewable resources, including offshore wind and distributed solar projects, and perhaps less diversity in generation type, in the State's renewable generation portfolio.

Under the No Action alternative, additional development of renewable resources would still occur to meet the 50 by 30 mandate, and associated impacts on the onshore and offshore environment of any such development would still occur. Under the No Action alternative, additional wind facility development could occur offshore of New York State and its electricity would be procured by other states. Under the No Action alternative, the increased competition in the offshore wind market introduced by other states in the region may lead to fewer purchase options for the State in the future.

The socioeconomic impacts associated with the Proposed Action may be reduced under the No Action alternative. As discussed in the SGEIS, low-income communities and communities

of color have historically been overburdened as a result of air pollution from energy-generating facilities, small stationary sources, and dense traffic. Regarding air quality, the No Action alternative would change or reduce the corresponding health benefits of reduced emissions and could disproportionately affect disadvantaged communities. Similarly, the No Action alternative would change or reduce the anticipated increase in workforce, including new jobs in manufacturing, installation, and operation of renewable energy facilities under the Proposed Action.

E. Unavoidable Adverse Impacts

There are no unavoidable adverse impacts that could not be avoided, minimized, or mitigated through applicable federal and state laws, regulations, and review processes.

Biomass and biogas energy were previously eligible technologies under the CES; however, these technologies would no longer be eligible to contribute to the 70 by 30 goal under the Proposed Action. As discussed in the Prior SEQRA Analyses biogas energy projects can reduce emissions of methane and CO₂ emanating from landfill sites, wastewater treatment facilities, and farms. A decrease in development in biogas energy could result in a change in methane and CO₂ from these sources compared to what was discussed in the Prior SEQRA Analyses.

F. Irreversible and Irretrievable Commitment of Resources

The future construction and operation of new large-scale renewable resources and distributed solar that may occur in response to the Proposed Action could result in irreversible and irretrievable commitments of resources; however, such commitments would be identified in site-specific environmental

analyses and avoided or minimized in accordance with applicable laws and regulations.

G. Growth-Inducing Aspects

The Proposed Action has the potential to lead indirectly to the creation of jobs in construction and operation of new facilities, payments to the State and localities, payments for fuel and land leases, and in-state purchase of materials and services. Additional indirect impacts under the Proposed Action are reflected in advancement in renewable technologies and changes in community character.

The increases in indirect impacts from the Proposed Action are not anticipated to vary substantially from what was described in the Prior SEQRA Analyses. However, the Proposed Action would result in a greater number of large-scale renewable energy and distributed generation projects, and some communities may host a greater number of these projects. Depending on the timing of projects within a single community, this could result in greater demand for supporting industries, including hotels, restaurants, and public services and an increase in tax revenue to local communities.

The Prior SEQRA Analyses discussed impacts on community character in terms of the visual and physical impacts from new renewable energy development. These impacts would be site specific, and the increase in renewable energy projects under the Proposed Action would not be expected to result in substantially different impacts from those described in the Prior SEQRA Analyses. As discussed in Section 3.1.1 of the SGEIS, the economic impact of agritourism in the state has grown over the last several years. Conversion of agricultural land to renewable resources could impact the agricultural character of some communities and affect growth of this industry. As

discussed in Section 4.2 of the SGEIS, a number of avoidance and minimization measures could be implemented that may minimize changes to a community's character. Utility-scale solar sited on agricultural land may limit agricultural opportunities during operation of the solar facility; however, agricultural activities on nearby land would generally not be affected. Co-location of solar panels and active agricultural uses is a common practice across the country. Solar developers can work with communities to develop complementary agricultural uses, such as grazing animals, pollinators, or shade-resistant crops.

H. Effects on Energy Consumption

The procurement of large-scale renewables and distributed solar is expected to increase the proportion of renewable energy in the total generation mix, although it is not expected to influence the amount of energy consumed. The Proposed Action would expand renewable energy as a source of New York's overall electric generation mix and ensure at least 70% of the energy used in New York is sourced from renewables. As described in the 2015 GEIS, additional distributed generation is likely to reduce consumption of grid-supplied power, and make electric load more dynamic and responsive to wholesale market price signals, potentially improving overall system efficiencies.

III. CONCLUSIONS

Based on the discussion set forth in the Final SGEIS, the Commission makes the findings stated above regarding the potential environmental impacts, as well as benefits, of the Proposed Action, and certifies that:

1. The requirements of the State Environmental Quality Review Act, as implemented by 6 NYCRR 617, have been met;
2. Consistent with social, economic, and other essential considerations from among the reasonable alternatives available, the Proposed Action being undertaken will yield overall positive environmental impacts, primarily by reducing the State's use of, and dependence on, fossil fuels, among other benefits, and is one that avoids or minimizes adverse environmental impacts to the maximum extent practicable, and that adverse environmental impacts will be avoided or minimized to the maximum extent practicable by incorporating as conditions to the decision those mitigative measures that were identified as practicable; and
3. As applicable to the coastal area, the Action being undertaken is consistent with applicable policies set forth in 19 NYCRR §600.5.

SUMMARY OF COMMENTS

This summary of comments is compiled for the benefit of the reader and is not intended to be a comprehensive source of all comments submitted in this proceeding or to reflect any weight given particular comments by the Public Service Commission or the Staff of the Department of Public Service. In addition to the comments received by entities that are summarized individually below, hundreds more comments have been submitted and considered in this proceeding.

The Commission received over fifteen hundred public comments relating to the White Paper. Most of the comments received were supportive of the White Paper and the State's 70 by 30 goal. Some of the overarching concerns from commenters include: prioritizing investments in New York's renewable resources rather than in nuclear power or Canadian hydropower; deferring consideration of the inclusion of Canadian hydropower in Tier 4; supporting family-sustaining careers for New Yorkers and investments in local communities in clean energy and energy efficiency; and ensuring clean energy investments benefit disadvantaged communities as required by the CLCPA.

Several commenters expressed concern regarding the availability of Tier 2 Renewable Energy Credits (RECs) for Community Choice Aggregation (CCA) programs. They propose allowing the New York State Energy Research and Development Authority (NYSERDA) to resell a portion of the Tier 2 RECs to the voluntary market at a discounted price. Additionally, they support capping the price of Tier 2 RECs and enabling CCA programs to competitively purchase Tier 1 RECs.

Hundreds of comments were received regarding the Great Lakes Wind Study. Supporters believe that New York can lead the entire Great Lakes region in wind and help create jobs and supply chain opportunities long past the construction phase of

potential projects. Commenters in opposition believe that the Study could result in development of wind turbines that they argue will be very harmful to lakeshore communities and that benefits will be limited as transmission congestion in the region has not been resolved.

Some commenters expressed opposition to Tier 4 due to concerns it may increase carbon dioxide (CO₂) emissions because hydropower may be diverted from its existing customers, potentially forcing those customers to use fossil fuels as a replacement. Further, some commenters express concern that Tier 4 may be in direct competition with Tier 1, which they argue creates far greater economic benefits for the State. Other commenters expressed support for the use of project labor agreements in solicitations. Some commenters called for the inclusion of biogas and renewable natural gas (RNG) as an eligible technology. Others expressed opposition to the use of natural gas in achieving the State's renewable energy targets.

Commenters

3Degrees

Alliance for Clean Energy Of New York (ACENY)

Alliance for Clean Energy of New York, Inc., Advanced Energy Economy Institute, and American Wind Energy Association (Environmental Entities)

All for Energy²

Ampersand Hydro, LLC (AHL)

Anbaric Development Partners, LLC (Anbaric)

Associated General Contractors of New York States (AGCNY)

Atlantic Shores Offshore Wind, LLC (ASOW)

Avangrid

Azure Mountain Power and Northern Power and Light, Corp. (AMP and NP&L)

Bloom Energy Corporation (Bloom Energy)

Boralex, Inc. (Boralex)

Borrego Solar Systems, Inc. (Borrego)

Brookfield Renewable Energy Group (Brookfield)

Clarkson University (Clarkson)

Clean Energy Advocates (CEA)³

Climate Jobs NY (CJNY)

City of Albany

City of New York (The City)

Citizens Campaign for Environment (CCE)

Clean Energy Advocates (CEA)

Coalition for Renewable Natural Gas (RNG Coalition)

Consolidated Edison and Orange and Rockland Utilities (The Companies)

Consolidated Edison Transmission (CET)

Consumer Energy Alliance (CEA)

Consumer Power Advocates (CPA)

Cornell University (Cornell)

Generate Capital (Generate)

EDF Renewables North America (EDFR)

Empire State Forest Products Association (ESFPA)

Energy Ottawa, Inc. (Energy Ottawa)

² All for Energy are All Our Energy, Alliance for a Green Economy (AGREE), Colorbrightongreen.org, Environmental Justice Task Force, Food & Water Watch, Gas Free Seneca, Mothers Out Front, New York Sustainable Business Council, Renewable Energy Long Island, Rochester People's Climate Coalition, Sane Energy Project, Seneca Lake Guardian, Inc, and the Sierra Club.

³ Clean Energy Advocates are Environmental Advocates of New York, Natural Resources Defense Council, New York League of Conservation Voters, and the Sierra Club.

Gravity Renewables (Gravity)
 Hydro-Québec US Energy Service Inc. (HQUS)
 Independent Power Producers of New York, Inc. (IPPNY)
 Invenergy Renewables, LLC, and energyRE, LLC (Aligned
 Developers)
 Joint Utilities⁴
 Joule Assets, Inc. (Joule)
 Key Capture Energy (KCE)
 Long Island Power Authority (LIPA)
 Micro-Utilities, Inc. (Micro-Utilities)
 Multiple Intervenors
 Municipal Electric and Gas Alliance (MEGA)
 National Biodiesel Board (NBB)
 National Fuel Cell Research Center (NFCRC)
 National Fuel Gas Distribution Corporation (NFGDC)
 National Hydropower Association (NHA)
 New York Association of Public Power (NYAPP)
 New York Battery and Energy Storage Technology Consortium (NY-
 BEST)
 New York Energy Climate Advocates (NYEC)
 New York State Electric & Gas Corporation, Niagara Mohawk Power
 Corporation, Rochester Gas and Electric Corporation New York
 Gas and Electric, National Grid, Rochester Gas and Electric
 (Named Utilities)
 New York Independent System Operator (NYISO)
 New York Municipal Power Agency (NYMPA)
 New York Offshore Wind Energy Alliance (NYOWA)
 New York Power Authority (NYPA)
 New York Renews
 Nucor Steel Auburn (Nucor)
 Northeast Dairy Producers Association (NEDPA)
 Plug Power, Inc. (Plug Power)
 Ravenswood Development, LLC (Ravenswood)
 Real Estate Board of New York (REBNY)
 ReEnergy Holding, LLC (ReEnergy)
 Renewable Natural Gas Coalition (RNG)
 Save on Ontario Shores, Inc. (SOS)
 Serium Energy Storage (Serium)
 Shell North America (Shell)

⁴ The Joint Utilities are Central Hudson Gas & Electric Corporation, Consolidated Edison Company of New York, Inc. (Consolidated Edison), New York State Electric & Gas Corporation, Niagara Mohawk Power Corporation, Orange and Rockland Utilities (O&R), Inc., and Rochester Gas and Electric Corporation.

Sierra Club, New York City Environmental Justice Alliance, and
Climate Works for All (Sierra Club et al.)
Sustainable Otsego
Sustainable Westchester, Inc. (Sustainable Westchester)
Taylor Biomass Energy, LLC (Taylor Biomass)
The Business Council of New York State (Business Council)
Transmission Developers, Inc. (Transmission Developers)
Valcour Wind Energy, LLC (Valcour)

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I. Disadvantaged Communities

Boralex

Boralex argues that the implementation of Tier 4 will have a significant positive impact on the disadvantaged communities of New York City. Boralex states that there is evidence that reducing emissions from New York City's electric generation sector will benefit the communities which have historically borne the burdens of negative public health effects associated with air emissions.

CEA

CEA encourages the Commission to establish a meaningful stakeholder engagement process to thoroughly address the input of environmental justice and disadvantaged communities and suggests it could be conducted in partnership with the Climate Justice Working Group. CEA recommends that future clean energy solicitations require developers to identify and articulate the benefits of the project to disadvantaged communities and that the NYSERDA prioritize the selection of proposals that will demonstrably benefit disadvantaged communities.

The City

The City recommends that the Commission structure the Tier 4 program in a manner that produces meaningful benefits for disadvantaged communities. The City argues that the capacity provided by the existing fleet of heavily polluting in-City aging fossil-fueled generating facilities, which are disproportionately located in disadvantaged communities, must be replaced and that the Tier 4 program presents an opportunity to do so. The City suggests the Commission direct NYSERDA to

qualitatively and quantitatively consider benefits inuring to disadvantaged communities as part of its bid review process. The City encourages actions that promote dispatchability and the strategic location of such resources, similar to traditional fossil fuel-fired peaking units.

CCE

CCE advocates that NYSERDA should provide comprehensive reporting and metrics for benefits to disadvantaged communities to ensure that the State is meeting the benchmarks in the CLCPA. CCE recommends that the State ensure that the programs benefiting disadvantaged communities are looked at holistically, not on a program-by-program basis, and consider the diverse needs of low and moderate income communities. CCE supports the consideration during the bidding process of community engagement and benefits to disadvantaged communities and urges NYSERDA to expand on the role these criteria will play in the bidding process.

CJNY

CJNY argues that the White Paper does not specify how the Commission will meet the equity requirements or investment mandates for disadvantaged communities and states that additional detail should be provided. CJNY urges the Commission to develop a bold strategy to promote energy efficiency and distributed generation investment in disadvantaged communities and other communities downstate.

Joint Utilities

The Joint Utilities agree with NY Renew's recommendation that focus be given to meeting the 35% requirement and 40% goal for benefits to disadvantaged

communities, to reduce co-pollutants and carbon emissions. The Joint Utilities note that the electric vehicle (EV) charging program recently approved by the Commission presents a significant opportunity for improvement of air quality in disadvantaged communities and encourages consideration of additional program and funding options, outside of the customer funded CES construct, that consider the transportation sources of co-pollutants.

LIPA

LIPA states that further details regarding identification of disadvantaged communities and evaluating benefits to those communities are needed to achieve CLCPA goals for disadvantaged communities. LIPA recommends that evaluation of achievement of those goals recognize the benefits of transmission investments on reducing emissions in disadvantaged communities.

NY Renews

NY Renews argues that the CES White Paper does include sufficient commitments or details regarding support of and benefits for disadvantaged communities to fulfill the CLCPA requirements. NY Renews posits that the White Paper reflects a legacy CES that does not sufficiently reflect the equity and justice provisions of the CLCPA or sufficiently analyze the CES's impacts on disadvantaged communities. NY Renews states that the CES plans should include detail on prioritization of hiring in environmental justice areas and other prioritization environmental justice concerns. NY Renews proposes that the current CES economic impact analysis should be released and updated to include further study on the impacts and benefits of the CES on disadvantaged communities and that a compliance

framework should be established to implement and track progress towards achievement of the requirement that no less than 35%, and a goal of 40%, of the benefits from State climate investments be realized by disadvantaged communities. NY Renews further recommends that the Commission develop a pathway to prioritize reduction of co-pollutants and carbon emissions in disadvantaged communities. NY Renews also expresses concerns about the potential environmental, health and economic impacts associated with the Tier 4 proposal and requests that the Commission commence a Tier 4 technical conference to address these concerns.

NYOWA

NYOWA recommends that the Phase 2 solicitation assign a specific number of points within the economic benefit category to recognize project components that will benefit disadvantaged communities and, further, that the solicitation should provide specific guidance as to what actions will constitute benefits to disadvantaged communities, such as jobs created, capital investments, and training programs.

NYPA

NYPA states that it has a team focused on supporting disadvantaged and marginalized communities located near its facilities and assets and explains that for years it has engaged with various State entities, community groups, and other stakeholders to provide meaningful programs and services that meet the unique needs of these communities. NYPA asserts that the proposal to effectuate CLCPA requirements by evaluating projects based in part on how they will benefit disadvantaged communities is an important and laudable step and provides following implementation recommendations: the Commission should

require that Staff inventory the work that has been done in this space by the various community and environmental advocacy groups and use this information when developing both the tracking and reporting framework for how disadvantaged communities are benefiting from progress towards the implementation and project execution; NYSERDA should advocate within the Climate Justice Working Group that the work of the Just Transition Working Group be included in the identification criteria that the Working Group adopts; NYPA and other members of the Climate Action Council should ensure that the barriers report is completed on time and is informed by the work of the Just Transition Working Group, as well as input from community stakeholders and other entities with expertise in this area.

Transmission Developers

Transmission Developers agree that CLCPA implementation and investments in clean energy projects should provide benefits to disadvantaged communities and selected projects should demonstrate that they will reduce fossil fuel generation that impacts disadvantaged communities.

II. Eligibility

Environmental Entities

Environmental Entities support including biogas and biomass energy generating facilities in the CES. Environmental Entities argue that the use of biomass, biogas, and other non-fossil fuels as fuel sources for a fuel cell meet the CLCPA definition of renewable energy. Environmental Entities state that inclusion of resources fueled by anaerobic digestion will provide additional benefits by eliminating methane emissions, which have a significantly higher impact on global warming than

CO2. Environmental Entities also note that the use of biogas in power production offsets the use of fossil fuel in power production.

Bloom Energy

Bloom Energy states that Commission-authorized programs, including the Renewable Portfolio Standard (RPS), have consistently considered biogas-fueled resources eligible as renewable electric generation. Bloom Energy argues that based on the text of the CLCPA and the physical characteristics of generation resources, fuel cells that are fueled by biogas or renewable hydrogen should be eligible for the CES, while combustion generators, even if fueled by renewable hydrogen, should not be eligible for the CES. Bloom Energy explains that biogas is not a fossil fuel and that fuel cells employing biogas will reduce emissions and create other benefits, while combustion generators, even if fueled by renewable hydrogen, create significant local pollution.

The Business Council

The Business Council recommends that biofuels be included in the CES as a renewable resource. The Business Council proposes a separate CES tier be created for biofueled resources.

Clarkson

Clarkson recommends that biofuels be included in the CES as a renewable resource. Clarkson states that it would transition from natural gas to renewable natural gas if it were available and that such a transition will help reduce its greenhouse gas emission, support the State's emission goals, and provide addition benefits by reducing food waste disposal in

landfills, stabilizing the fragile dairy economy, and helping further student research opportunities. Clarkson asserts that RNG should be used as a bridge to rapidly reduce fossil fuel use in the near term in advance of the longer-term transition to electrify our buildings.

CEA

CEA expresses support for the eligibility rules proposed in the White Paper.

The City

The City recommends that biofuels be included in the CES as a renewable resource. The City notes that the New York State Climate Action Council recently identified a need to establish a Waste Management Working Group to examine the contribution of waste management emissions, including landfill methane, to Statewide GHG emissions and argues that inclusion of biofuels as a renewable resource would support reductions in those emissions.

CCE

CCE recommends that biofuels from anaerobic digesters be included in the CES as a renewable resource.

Cornell

Cornell encourages the limited inclusion of bioenergy in the CES, with appropriate sustainability safeguards. It explains that bioenergy can efficiently provide both baseload and dispatchable heat and electricity, using continuously available waste streams including manure, food scraps, and forest residue, while generating additional benefits of protecting water quality, improving soil health, and

sequestering carbon. Cornell argues that regardless of whether biofuels satisfy the CLCPA definition of renewable energy systems, they should be considered zero emission electricity and recognized as part of achieving the 2040 target.

ESFPA

ESFPA suggests that the Commission create an additional tier within the CES framework for resources that do not meet the definition of renewable energy system under the CLCPA, but which are low-carbon, biogenic-carbon-neutral resources, such as biofuels. ESFPA asserts that NYSERDA's consultant for preparation of the Climate Action Plan under the CLCPA concluded that bioenergy is needed in the transition to a carbon-neutral economy.

Generate

Generate argues that the exclusion of anaerobic digestion, which is an example of a mature clean energy technology that produces significant collateral benefits is inconsistent with New York State's previous clean energy policy and the recommendations of the Intergovernmental Panel on Climate Change (IPCC), The International Energy Agency, the United Nations Food and Agriculture Organization, and many other major international energy and climate bodies. Generate recommends that biofuels be included in the CES as a renewable resource, subject to appropriate sustainability and land use guidelines.

IPPNY

IPPNY argues that the Commission should clarify that, consistent with the Climate Act, fuel cells are eligible under the CES unless they use a fossil fuel resource and that biofuel

are not fossil fuel resources. IPPNY notes that in the definition of renewable energy resources in the New York State Energy Law, Section 1-102, biofuels and biomass are renewable fuels, not fossil fuels.

Joint Utilities

The Joint Utilities agree with the City and EEANY that biogas must play a role in meeting New York's renewable electricity and GHG emissions goals. The Joint Utilities argue that the Commission should establish biogas as a clean energy resource and either make it eligible for Tier 1 or establish a separate tier for biogas resources.

LIPA

LIPA seeks further explanation of the White Paper's proposed end date of 2029, subject to existing contracts, for RECs produced from biomass, biogas, or fuel cell projects. LIPA recommends Tier 1 REC eligibility for existing fuel cell contracts executed in good faith prior to CLCPA enactment until the CLCPA requirement of 100 percent carbon-free electric generation by 2040 becomes effective.

NBB

NBB argues that the CLCPA's omission of biomass or biogas as eligible technologies is a major shortcoming of that law and states that it will be seeking legislative action to include those resources.

NFCRC

NFCRC recommends that biofuels be included in the CES as a renewable resource. NFCRC argues that biogas and hydrogen are zero-emission sources of generation for power and heat and

that broad exclusions of these resources in the White Paper therefore will limit reductions of GHGs, criteria air pollutants, and toxic air contaminants. NFCRC also argues that these resources provide resilience benefits. NFCRC contends that the White Paper applies an inappropriately narrow definition of CES-eligible hydrogen, as hydrogen derived from organic waste is generally considered renewable.

NFGDC

NFGDC recommends that biofuels be included in the CES as a renewable resource, stating that it will help ensure a sufficient supply of dispatchable generation as intermittent resources begin to become more pervasive.

Plug Power

Plug Power recommends robust support for renewable green hydrogen, arguing that its hydrogen fuel cells will play a pivotal role in offering reliability and flexibility to a highly renewable system. Plug Power argues that fuel cells that utilize hydrogen produced from grid power should be eligible to participate in the CES. In addition, Plug Power argues that the Commission should expressly state that non-grid-connected fuel cells running off are eligible to participate in the CES, noting that such fuel cells may be used to significantly reduce demand for electricity, replace existing diesel generators or provide direct power to a building behind the meter.

ReEnergy

ReEnergy recommends that biofuels be included in the CES as a renewable resource. ReEnergy states that bioenergy is included as a renewable resource in virtually all renewable energy programs across the United States and internationally.

ReEnergy explains that its Black River facility supports an estimated 300 direct and indirect jobs and has total annual operating expenses of nearly \$30 million, with approximately half of that spent on sustainably sourced wood fuel. ReEnergy proposes that the Commission create a separate tier within the CES framework for resources that do not meet the definition of renewable under the CLCPA but that are zero-carbon or low-carbon dispatchable resources that should be supported for purposes of ensuring the State's ability to reach the CLCPA goals.

RNG Coalition

RNG Coalition recommends that biofuels be included in the CES as a renewable resource, arguing that there is significant potential for the use of RNG as a complement to other strategies such as electrification and renewable liquid fuels in the decarbonization of New York's thermal and transportation fuel demand. Further, the RNG Coalition advocates that using the methane from organic wastes productively, rather than flaring it, both reduces direct emissions of methane from the waste sector and displaces fossil fuel carbon dioxide emissions in other end use sectors.

Shell

Shell contends that the White Paper recommendations for the use of "green hydrogen" should be expanded so this resource can assume a larger role in meeting state energy policy goals, particularly in enabling a transition to a climate-neutral energy system. Shell urges the Commission to provide policy direction and support for hydrogen production and transportation to address technical, economic, and regulatory barriers and advance the commercial viability of this energy resource.

Sustainable Otsego

Sustainable Otsego recommends that all carbon-free energy sources, including hydropower and nuclear power, be eligible to generate RECs, but argues that REC generation should be weighted according to the resource's ability to provide reliable, non-intermittent generation.

Taylor Biomass Energy

Taylor Biomass Energy notes that CLCPA disqualifies biomass energy systems as renewable sources and prohibits waste-to-energy products, which had been previously certified as clean renewable technologies. Taylor Biomass Energy requests that these technologies currently authorized for Tier 1 eligibility be grandfathered in perpetuity.

III. Modifications to the Renewable Energy StandardA. Load ForecastBoralex

Boralex agrees with the Clean Energy Advocates that NYSERDA needs to ensure that overly conservative load forecasts do not result in under-procurement of renewable energy, including through updating the Statewide load forecast annually through the Divergence Test process.

CEA

CEA argues that NYSERDA's 2030 forecast of electric load is understated and should be revised upward to reflect the need for more rapid deployment of electric vehicles, increase in building electrification, and the uncertainty in achieving and

maintaining energy efficiency reductions. CEA supports NYSERDA's proposed approach of working backward from the CLCPA's 2050 climate mandates to establish 2030 forecasts. For energy efficiency forecasts, CEA recommends that NYSERDA take a more conservative approach based on actual trends in energy savings achieved to date. CEA recommends that NYSERDA continue to solicit Fixed REC bids alongside any future offerings of the Index REC option.

IPPNY

IPPNY argues that there are existing system obstacles that, unless resolved, will prevent the State from ultimately meeting the 70 by 30 Target, such as transmission bottlenecks and the growing threat of curtailment. Further, IPPNY states that generators, under the NYISO Minimum Interconnection standard, have no assurances that their output will not be curtailed in the future by the subsequent interconnection of another renewable generator. IPPNY asserts that the 70 x 30 goal cannot be reached unless the renewable-on-renewable curtailments are resolved.

NBB

NBB emphasizes the need for accurate forecasting of additional loads due to anticipated building electrification and that potentially optimistic estimates of energy efficiency. It states that the projected overall statewide load of 150 million MWhs listed in the Staff White Paper artificially and substantially reduces the calculated level of OSW resources necessary to serve NYISO grid loads during winter months. To address this issue, it recommends that Staff use the NYISO 2020 Goldbook estimates, which align with its estimates and, importantly, estimate peak grid load impacts of 40,000 MW due to

building electrification by the year 2050. NBB explains that the NYISO Goldbook translates into a need for approximately 90,000 MWh of wind capacity just to accommodate this projected building load, as compared to the Staff White Paper projection of 9,000 MWh of OSW capacity.

NYISO

NYISO states that it would like to coordinate with Staff and NYSERDA on the input assumptions and data that were used to construct the proposed 70 x 30 load forecast, to fully understand the energy efficiency, electrification, and EV assumptions that were incorporated into the White Paper's baseline forecast.

B. Annual Solicitation

Environmental Entities

Environmental Entities agree that NYSERDA should procure at least 4,500 GWh per year through 2021 - 2026. Environmental Entities support an annual solicitation that should be issued by May 1 of each year and should be followed with a second solicitation if this minimum is not achieved. Environmental Entities argues that the schedule should remain in place regardless of procurement levels in Tier 4.

Avangrid

Avangrid supports granting NYSERDA an increased level of flexibility to manage the procurements to ensure the CLCPA mandates are achieved. Avangrid urges the State to balance the need for NYSERDA procurement flexibility and regular periodic industry demand by maintaining an adjustable, but non-zero, minimum annual procurement volume for both Tier 1 and OSW.

Avangrid recommends that NYSERDA be required to file with the Commission any plans to deviate significantly from the projected annual GWh levels provided in the CES White Paper and subsequent Commission-approved plans and allow all stakeholders to provide feedback.

Boralex

Boralex strongly supports the White Paper proposal for NYSERDA to procure 4,500 annual GWh of new Tier 1 renewable energy each year from 2021 - 2026. Boralex argues that the establishment of a predictable and consistent procurement process will help to improve the quality of projects selected. Boralex argues that NYSERDA should be provided with reasonable flexibility regarding annual procurement.

Borrego

Borrego supports NYSERDA's consideration of the Clean Energy Industry's recommendation to establish a minimum quantity of annual Tier 1 procurement that is 75 percent of the proposed annual procurement target. Borrego states that the absence of a minimum procurement quantity creates significant uncertainty which disrupts development timelines, creating a chain reaction of impacts that can ripple through the design, financing, permitting, procurement, and construction phases of a project. Borrego asserts that predictability directly translates into lower development costs and efficient timelines, which consequently lower REC costs.

CEA

CEA supports establishing a multi-year procurement schedule and urges the Commission to set a clear expectation that NYSERDA will procure at least 4,500 GWh per year from Tier

1 resources. CEA argues that this approach will send a clear and strong investment signal to renewable energy developers. Should NYSERDA fall behind the 1,000 MW behind the 4,500 GWh/year linear trajectory following any annual solicitation, CEA recommends it should be required to conduct a make-up solicitation in that same calendar year to get back on track. CEA recommends revisiting the maximum contract length for Tier 1 projects to consider contracts of up to 25 years as longer contracts would facilitate more attractive REC prices. CEA argues that 25 years would cover a greater fraction of the expected commercial life of renewable projects, which would reduce the number of years that these projects would need to be supported through Tier 2 or a similar mechanism once their original Tier 1 REC contract expires. CEA argues that soliciting and procuring stand-alone storage projects should be distinct from the existing Tier 1 because stand-alone storage is not a generation resource and therefore does not directly contribute to attainment of the 70 by 30 target. CEA states that storage should be supported through adders for projects that pair storage with new renewable resources.

The City

The City recommends that the Commission should continue maintaining an oversight role over NYSERDA's procurements, in accordance with its statutory obligation to ensure that rates remain just and reasonable. The City argues that those procurements should proceed in a manner that does not cause unexpected or unreasonable utility bill impacts for customers.

CCE

CCE supports including flexibility in OSW and Tier 1 procurement rules for NYSERDA and recommends NY also consider improvements in technology and coordination with federal agencies in the procurement process.

EDFR

EDFR agrees that NYSERDA should have some flexibility in the amount of GWh it annually procures. EDFR requests that NYSERDA maintain some level of consistency in its procurement process by procuring at least 75 percent of the annual target amounts each year and establishing predictable solicitation schedules. EDFR respectfully opposes the recommendation that the Tier 1 target be reduced based on Tier 4 procurements. EDFR argues NYSERDA should adjust the ratio between price points and non-price points to 60 percent price points and 40 percent non-price points to better reflect the development, permitting, and construction realities of the great market of New York. A ratio of 60/40 would reflect and provide significant weight for applicants who have strong experience, community engagement, and demonstration of support. EDFR suggests that Tier 1 contracts should be extended to a duration of 25 years.

LIPA

LIPA argues it is reasonable to allow NYSERDA a certain degree of flexibility in annual procurement targets, but NYSERDA should attempt to provide a reasonably predictable procurement trajectory to provide stable market signals to help achieve the CLCPA goals.

Multiple Intervenors

Multiple Intervenors generally support flexibility for NYSERDA to procure renewable resources toward meeting the

CLCPA's goals, which could help to reduce the costs of the CES, but states that NYSERDA should exercise such flexibility judiciously. Multiple Intervenors explains that if the requested flexibility is granted, NYSERDA should carefully monitor and adjust its procurement activities as needed to respond to market signals subject to active oversight by the Commission and Staff. Furthermore, Multiple Intervenors emphasizes that the CLCPA's goals are ambitious and will require a significant amount of new renewable development, with significant costs. To the extent that NYSERDA can administer the CES in a way that maximizes value and minimizes costs to customers, it should do so.

The Joint Utilities

The Joint Utilities recommend Commission oversight of changes from year to year in NYSERDA's procurement of Tier 1 and OSW resources to avoid price volatility or unreasonable bill impacts. The Joint Utilities also recommend NYSERDA be required to notify the Commission of any plans to deviate significantly. The Joint Utilities state that the Commission should take a measured approach to the calculation of Alternative Compliance Payments (ACPs) and take steps to ensure that the monies collected are used to benefit customers, such as through by paying down the cost of future RECs.

NHA

NHA states that NYISO's Grid in Transition report claimed that to permit the grid to meet load with high levels of intermittent resources, NYISO must have sufficient flexible, dispatchable and potentially fast ramping supply to balance variations in intermittent resource output. It continues that the Commission and the NYISO should cooperatively study, through

a stakeholder proceeding, whether the scoring factors in the CES could be designed to fully weight the attributes the wholesale grid will need in the future.

NYPA

NYPA concurs with the recommendation that NYSERDA should acquire, at no cost, Tier 1 RECs generated in hours and at locations where the applicable real-time LBMP is negative. NYISO points out that this action would incentivize generation owners to bid at or above \$0/MWh to avoid causing negative LBMPs and forfeiting their RECs to NYSERDA.

Shell

Shell supports the recommendation that the Commission issue one comprehensive order to address all CES program tiers and argues that a comprehensive approach is required. Shell agrees that setting technology-specific program targets with a defined solicitation schedule will encourage investment. Shell supports targeted approach for Tier 1 and Tier 4 RECs to stimulate development and recommends combining scheduled procurement with flexibility to account for technological advances, project abandonment, and load changes. Shell states that a consistent procurement schedule with flexibility to respond to market conditions will improve investment certainty, but argues that NYSERDA should not be permitted to cancel procurements based on past solicitation successes, alleging that "on again/off again" signals inhibit market confidence.

Sustainable Otsego

Sustainable Otsego recommends that DPS and NYSERDA guide procurement based on annual and seasonal basis demand and

capacity for each New York Control Area (NYCA) zone on a seasonal basis for the next two decades.

Transmission Developers

Transmission Developers support the White Paper proposals that NYSERDA be allowed to remain flexible in contracting and pricing, arguing that these processes should be decided based on current circumstances. Transmission Developers state that a standard offer or direct negotiation process for Tier 4 should be considered due to the need to reduce emissions in New York City and generate an economic response to the public health crisis. Transmission Developers argue that these processes could deliver renewable generation to Zone J a year earlier than a traditional request for proposals (RFP) and recommends this approach to accelerate decarbonization. Transmission Developers also contend that these processes could allow specific projects to schedule contract timing more efficiently and avoid costly and detrimental interconnection delays. Transmission Developers assert that these contracting processes can be structured to offer competitive and commercially viable contracts and recommend existing solutions to achieve this.

C. Viability

Anbaric

Anbaric argues the White Paper's recommendation that NYSERDA should be able to reject any land-based renewable energy bid outright if it scores a zero on project viability is reasonable and sound. Anbaric adds that the ability to screen out projects that score a zero on project viability will be a useful tool for the evaluators that saves time and effort, but

the underweighting of project viability overall still creates the possibility that relatively non-viable projects that propose extremely low pricing and generous economic benefits could win procurement awards. Anbaric recommends that, for future OSW procurement solicitations, the Commission increase the project viability percentage from 10 percent to 30 percent to reflect its fundamental importance.

Boralex

Boralex suggests that peak coincident points should be available to resources if the generator is located within New York State. Boralex agrees with NYSERDA's proposal in the White Paper that future Tier 1 solicitations should combine the project viability and peak-coincidence points categories to better determine which projects are operationally flexible and peak coincident and provide the power system with desirable characteristics.

Borrego

Borrego supports NYSERDA's increased attention to and evaluation of project feasibility and viability. Borrego argues that low-cost bids are often the result of infeasible projects that outbidding legitimate projects from sophisticated developers that understand the true costs of delivering renewable energy projects. Borrego maintains that this discourages legitimate developers from participating in competitive programs and can negatively impact program budgets and success due to high levels of project attrition. Borrego agrees that it is important that NYSERDA pay increased attention to potential curtailment and congestion issues as it evaluates project proposals. Borrego suggests that NYSERDA could host a technical conference or publish a proposed implementation plan

to fully inform stakeholders and provide an opportunity for detailed feedback on its proposed evaluation criteria.

Borrego states that evaluating and safeguarding against congestion risk is exceptionally difficult and could result in the unnecessary elimination of valuable renewable energy projects, despite best efforts to define rigorous and transparent evaluative criteria. Borrego suggests that co-located battery storage to be a solution to curtailment, but recognizes storage costs remain high. Borrego states that NYSERDA's proposal to combine the project viability and operational flexibility categories into one 20 percent category as an unlikely approach to offset this dynamic because it does not adjust the overall price/non-price evaluation ratio. Borrego suggests NYSERDA revisit its approach to encouraging co-located battery storage and consider additional, tailored incentive structures to ensure the inclusion of storage in Tier 1 bids.

The City

The City supports the White Paper proposal to emphasize project viability and grid interactivity as part of NYSERDA's Tier 1 bid review process. The City recommends that the criteria should be made transparent to developers in each NYSERDA Tier 1 procurement event and NYSERDA should provide a detailed explanation of its findings and conclusions to any developer whose proposed project is rejected on viability or grid interactivity grounds. Additionally, the City advocates that NYSERDA should add sub-categories to its future bid review processes, including but not limited to benefits inuring to disadvantaged communities, reductions to criteria pollutants, and mitigation of cumulative GHG emissions.

EDFR

EDFR recognizes and supports NYSERDA's need to have some flexibility in the evaluation process and supports the merger of project viability category with the operational flexibility and peak coincidence category for a combined total scoring of 20 percent. EDFR also states that any determination that a project is "not presently viable" should be done in a transparent manner.

KCE

KCE supports NYSEDRA's proposal to combine the project viability criteria with the operational flexibility and peak coincidence criteria in Tier 1 bid evaluations. Additionally, KCE suggests NYSERDA review and consider how the current Tier 1 scoring criteria may serve to incentivize smaller storage projects versus larger projects which are most cost effective proportional to their size.

LIPA

LIPA supports the proposed changes to the viability criteria if RFPs provide a sufficient level of detail to allow a developer to determine how a project's state of immaturity and predication on unrealistic economic or regulatory assumptions will be determined by the Technical Evaluation Panel.

D. New Portfolio Risk Factors and Delivery Requirements

Environmental Entities

Environmental Entities agree that it is appropriate for the Tier 1 evaluation process to be modified to consider issues of transmission congestion and curtailment. Environmental Entities argue that the renewable industry should have the

opportunity to review and comment on the specific and transparent evaluation criteria prior to their finalization.

Environmental Entities argues that the contract structure for Tier 1 should not be modified to allow NYSERDA to RECs at a price of zero during times of negative LBMPs in the energy market (LBMP). Environmental Entities states that having NYSERDA obtain the RECs at a price of zero when the LBMP is negative does not influence location selection and does not address issues of dispatchability.

The City

The City argues that the Commission should look to design a system that procures sufficient quantities of complementary resources and systems with dispatchable qualities to reduce, to the greatest extent possible, the potential for curtailment.

IPPNY

IPPNY supports the White Paper proposal that NYSERDA be required to adequately account for potential dispatchability issues and curtailment effects in its bid evaluation process and consult with DPS Staff, the NYISO, and the transmission owners to ensure its analyses are as fulsome as possible. IPPNY suggests that any bidding review parameter that has the potential to cause NYSERDA to reject a bid based on potential curtailment considerations should be clearly and transparently established in the solicitation materials and should include a right for rejected bidders to appeal NYSERDA's rejection in a timely manner.

IPPNY argues that the White Paper's proposal that NYSERDA acquire RECs generated during hours with negative LBMPs without compensation is ill-suited to address the curtailment

issue. Rather, IPPNY recommends the DPS Staff to work with the NYISO to modify rules so that the dispatchability of existing and contracted renewable facilities is not threatened with curtailment by subsequently interconnected renewable facilities. IPPNY urges the Commission to emphasize that any necessary tariff revisions must be effective before the beginning of the next REC solicitation process.

EDFR

EDFR supports the proposal to effectively analyze available transfer capability, curtailment, and congestion issues in the bid evaluation process but is opposed to the proposal that RECs be acquired at no costs when the LBMP is negative. EDFR states that developers in the renewable energy sphere already have strong incentives to avoid curtailment and that allowing NYSERDA to obtain RECs at no cost when the LBMP is negative will not influence site selection or cure issues with dispatchability.

Nucor

Nucor supports the proposal to allow consideration of broadened risk factors and urges NYSERDA to identify such risk factors to be considered before serious local network conditions develop. Nucor supports the White Paper's proposal that NYSERDA should acquire RECs without compensation when local conditions produce negative real-time energy prices.

Joint Utilities

The Joint Utilities agree that there should be no compensation for RECs generated in hours in which Zone J energy prices average below zero. However, the Joint Utilities seek

clarification regarding whether real-time prices or day-ahead hourly averages should be used for that determination.

LIPA

LIPA argues the proposed reforms are reasonable considerations. LIPA agrees with the proposal to eliminate payments for RECs generated when LBMPs are negative since, as suggested, it may encourage strategic investment of renewables. LIPA recommends that an approach that uses both price signals and planning for "complementary transmission development" is likely to be more effective than price signals alone.

NYISO

NYISO comments that there are several potential benefits to a rule that NYSERDA acquires RECs generated during negative LMBP hours without compensation, including avoidance of uneconomic prices that send the wrong price signals to investors, leading to more renewable curtailment, more uneconomic system dispatch, and increased overall renewable resource subsidy costs. However, NYISO notes that this could result to unintended consequences in certain circumstances and suggests further analysis and discussion.

IV. Modifications to the Offshore Wind Standard

A. 9 GW goal

Environmental Entities

Environmental Entities asserts that NYSERDA should be authorized to conduct procurements to achieve the entire 9 GW statutory mandate.

Anbaric

Anbaric recommends the Commission formally adopt the CLCPA's minimum statewide goal of 9 GW of offshore by 2035 and grant NYSERDA authority to procure the remaining amount of ORECs necessary to achieve that goal without needing additional authorization from the Commission, given that the 9 GW goal is now a statutory requirement. Further, Anbaric recommends that NYSERDA have no maximum procurement requirements for any one solicitation. Anbaric argues that project size will likely increase as technology develops. Anbaric also encourages the Commission to authorize NYSERDA to conduct one or more direct access OSW transmission procurements in the future.

Anbaric disagrees with the White Paper's statement that, "For the time being, the potential for backbone networks or other non-radial solution options remains speculative." Anbaric states that essential work of upgrading the onshore electric grid to absorb 9 GW of OSW energy can and should be done regardless of the ultimate location of the NY Bight lease areas.

ASOW

ASOW recommends the Commission adopt a goal of at least 9 GW of OSW generation, authorize NYSERDA to conduct solicitations pursuant to a posted schedule, and contract with 9 GW of OSW generation projects by 2027, in compliance with the CLCPA. ASOW argues that requiring NYSERDA to submit a petition and receive authorization to conduct each future OSW solicitation is not a productive use of resources and brings uncertainty into these markets. ASOW suggests that a flexible approach to operation schedule be used to address circumstances that may be beyond a developer's control.

CEA

CEA agrees that the Commission should formally adopt the CLCPA's statewide goal of 9 GW of OSW by 2035. CEA supports including mandatory prevailing wage, efforts to secure Project Labor Agreements, and use of environmental and fisheries mitigation plans incorporating Best Management Practices in the July 2020 RFP. Further, CEA recommends NYSERDA study the contracting mechanisms employed to date to evaluate their cost-effectiveness for ratepayers and the need for additional or alternative contracting mechanisms in the future. CEA also supports the added requirement of improved mitigation of embodied carbon for the July 2020 RFP. CEA suggests that solicitations should continue to prioritize benefits to disadvantaged communities. CEA recommends that the Commission authorize NYSERDA to conduct a make-up solicitation in any calendar year when the first solicitation procures an amount below a certain threshold. Further, CEA argues that NYSERDA should meet a multi-year minimum, which would not impose a minimum procurement level for any one solicitation. CEA suggests that the Commission should require NYSERDA to notify it via a public report when NYSERDA seeks to deviate substantially from the projections.

The City

The City recommends that NYSERDA should have flexibility to administer its OSW procurements, but the Commission also should continue to maintain an oversight role over those solicitations.

CCE

CCE supports the goal of 9 GW of offshore wind and urges NYSERDA to continue with several provisions included in

this recent solicitation, including the evaluation of environmental and fisheries mitigation plans in future bids. While CCE supports the model of having no set maximum or minimum per year, CCE states that it is still important for New York State to set some benchmarks and timeline to ensure achievement of 9 GW by 2035.

CJNY

CJNY supports the adoption of the CLCPA's minimum statewide goal of 9 GW of OSW by 2035. CJNY supports the Commission's efforts to evaluate OSW proposals according to a best value procurement system that weights the overall economic impact of each proposal.

EDFR

EDFR strongly supports the adoption of the CLCPA's minimum statewide goal of 9 GW of OSW by 2035. EDFR is also generally supportive of providing NYSERDA flexibility with regards to timing of the procurement process to respond to market conditions; however, EDFR suggests that NYSERDA set a solicitation schedule that includes minimum procurement levels and cautions against giving NYSERDA general authority to delay or cancel future OSW solicitations.

LIPA

LIPA argues that after the 2020 solicitation, it will be important for NYSERDA to outline its remaining OSW procurement trajectory to provide a clear investment signal to the developer community. LIPA also suggests that NYSERDA balance future procurement trajectory against continuous technological improvements, declining OSW costs, permitting

considerations and timing, and the identification of required transmission system upgrades and cost allocation.

NYOWA

NYOWA supports NYSERDA's request in the White Paper that the Commission formally adopt the CLCPA's minimum statewide goal of 9 GWs of OSW by 2035. NYOWA generally supports the White Paper's proposal that NYSERDA have no minimum or maximum procurement requirements for any one solicitation but opines that there are five considerations that NYSERDA should be directed to consider when planning the timing and size of OSW solicitations. First, NYOWA points out that the BOEM has proposed new wind energy areas (WEAs) in the New York Bight, but that designation of those areas has been delayed. Second, NYOWA states that the availability of new WEAs and leases will inevitably bring new lease holders into the New York energy market and additional bidders into future solicitations, thus promoting greater competition and more competitive bids. NYOWA argues that NYSERDA should continue to encourage BOEM to move forward with the WEA designation and leasing in the Bight and time future solicitations accordingly to take full advantage of the larger pool of bidders.

NYOWA states that third, NYSERDA should consider the status of federal tax incentives in timing solicitations so bidders can take maximum advantage of any available tax savings, and fourth, NYSERDA should consult and coordinate with other states who are conducting solicitations and stagger solicitations accordingly to ensure that bidders have time to conduct proper due diligence and prepare competitive proposals that are responsive to New York State's needs and requirements. Finally, NYOW recommends the procurement schedule include mechanisms to prevent shortfalls. Although the White Paper

discusses the possibility of cancelling or delaying a future solicitation if NYSERDA selects more than one large project in a single solicitation, NYOWA states that the Commission should specifically authorize the use of make-up solicitations in years during which procurements under the first solicitation falls below a certain amount.

Directly related to the considerations above, NYOWA concurs with the White Paper that the State's ongoing transmission study of both the onshore local and bulk distribution systems, as well as an offshore network or coordinated transmission system, is appropriate. It adds that since the transmission studies underway at the Commission and the BOEM pertaining to the designation of wind energy areas in the New York Bight are both expected to be completed by the end of this year, the State should give a high priority to addressing offshore transmission issues.

Shell

Shell supports the 9 GW OSW target and notes that a comprehensive approach will be required to procure a certain amount of supply from specific technologies.

B. Reselling ORECs to Non-LSE Buyers

Environmental Entities

Environmental Entities state that they support the resale of ORECs by NYSERDA, but maintain that RECs sold to the voluntary market, either for compliance with a local law or for a green claim made by the REC buyer, should not be counted towards New York State's 70 by 30 renewable energy goal.

CEA

CEA supports to the reselling of ORECs but does not agree that any ORECs sold to the voluntary market should count toward the 70 by 30 target, given the CLCPA requirement that this obligation be satisfied solely by LSEs.

REBNY

REBNY also strongly supports allowing NYSERDA to resell ORECs to voluntary purchasers, including building owners, as proposed in the White Paper. REBNY states that RECs purchased by voluntary purchasers should be counted toward the 70 by 30 goal mandated by CLCPA.

Shell

Shell supports the recommendation by Staff and NYSERDA to allow LSEs to procure ORECs directly for compliance and not just directly from NYSERDA. It also supports the recommendation that NYSERDA be allowed to resell ORECs to non-LSE buyers, but at a cost no less than the LSE price. Additionally, Shell recommends that OREC instruments be transferrable to allow LSEs and customers to manage OREC exposure.

C. Great Lakes Wind Study

AGNY

AGCNY supports the Great Lake Wind Study because the study, and potential development, and construction of OSW in the Great Lakes, will create thousands of direct and indirect jobs in the Western New York region.

CCE

CCE encourages New York State to move forward with a feasibility study exploring the environmental, economic,

maritime, social, and community impacts of developing OSW in the Great Lakes. CCE recommends that the feasibility study use existing research to identify potential environmental and wildlife impacts of OSW development and consider those potential impacts within the context of climate change and other forms of large-scale electricity generation. CCE argues that using emission-free OSW energy helps to mitigate the impacts of climate change, which benefits the health of the Great Lakes. CCE states that developing OSW in the Great Lakes would ensure a portion of these jobs comes to Western New York and Great Lakes communities. Additionally, CCE recommends the feasibility study consider other potential local economic benefits, including but not limited to, benefits to the local tax base and benefits from potential community benefits agreements.

NYOWA

NYOWA supports the White Paper's proposal for NYSERDA to conduct a feasibility study of Great Lakes OSW consisting of three primary components: stakeholder outreach, analysis, and policy options. NYOWA agrees that it is prudent at this time not to establish a separate tier to support Great Lakes Wind.

V. Tier 2

3Degrees

3Degrees advocates for the development of a transparent and competitive tradeable REC market to support the cost-effective delivery of Tier 2 resources. It proposes a market sharing features with the Tier 1 program in which LSEs can purchase RECs from NYSERDA or third-party suppliers, self-supply, or arrange alternative compliance payments. 3Degrees contends that this will provide benefits to generators by

providing access to additional buyers and benefit ratepayers through a most efficient, cost-effective market. It states that requiring LSEs to acquire and retire RECs will maximize the cost-effective deployment of ratepayer funds and notes that the December 12, 2019 Order Adopting Changes to the Retail Access Energy Market promotes a tradeable REC market regarding energy service company (ESCO) procurement. 3Degrees claims that arranging structural compatibility with the Tier 1 REC market would attract investment required to achieve state energy policy goals.

Furthermore, 3Degrees notes that implementing a compliance obligation on LSEs consistent with the RES Tier 1 program will complement renewable products from ESCOs. It notes that the present proposal would limit the market availability of Tier 2 RECs to ESCOs, impairing market liquidity and reducing participant diversity. 3Degrees argues that requiring LSEs to acquire and retire RECs would create a single, open, and competitive market for Tier 2 RECs, increase market participation and activity, and provide price signal clarity and transactional flexibility to benefit all market actors.

ACE NY

ACE NY supports the petition by NYSERDA to establish a Competitive Tier 2 procurement and a new obligation to support the program for LSEs. ACE NY makes several recommendations to strengthen the program proposed by NYSERDA. First, it contends that the goal should be to maintain the baseline to achieve the CLCPA requirement of 70 percent renewable electricity in New York State by 2030 and 100 percent zero emissions electricity by 2040, at the lowest cost to rate payers.

ACE NY states that the program should be permanent and use a more aggressive procurement schedule than proposed in the

Petition. ACE NY notes that under the current proposal, all contracts would expire by 2025, five years before the CLCPA statutory deadline and that the Petition proposes to procure one-third of resources in each of three years, a schedule that ACE NY argues creates a significant risk of resource export or retirement. To avoid these outcomes, ACE NY instead advocates a minimum of nine years of three-year contracts and recommends that NYSERDA procure 75 percent of the available baseline of eligible MWh in the first solicitation to retain more of the state renewable baseline sooner. ACE NY also requests transparency in each year regarding the number of Tier 2 RECs available and the amount NYSERDA intends to procure.

ACE NY argues that the program spending cap should not be arbitrary, maintaining that even without the \$200 million cap proposed, New York State could still control costs with the confidential maximum bid price. ACE NY recommends that the prevailing Tier 1 REC price should inform this confidential maximum bid price, arguing that the former represents the approximate replacement cost of exported or retired resources.

ACE NY contends that the Tier 2 Program should procure RECs for the voluntary market and support a "Made in NY" clean energy product. The Commission should consider authorizing NYSERDA to sell Tier 2 RECs as a "Made in New York Green Energy" product to ESCOs, utilities, CCA programs, and end users. ACE NY argues that these sales would indicate a willingness by the voluntary market to pay premiums for such RECs, instead of the as-bid REC prices of the NYSERDA three-year contract.

Finally, ACE NY recommends that New York State should pursue other policy measures that support Tier 2 resources to reduce the cost of the Competitive Tier 2 Program. Their recommendations include supporting the NYISO efforts to establish wholesale market carbon pricing, allowing Tier 2

resources to receive the E-value in the Value of Distributed Energy Resource (VDER) value stack if become a community-distributed generation (CDG) project, consideration of allow ESCOs to transition existing customers to a "Made in New York Green Energy" product through Tier 2 RECs, and allowing all output from repowered facilities to qualify as CES Tier 1 resources.

Environmental Entities

Environmental Entities support the establishment of a Competitive Tier 2 program.

AHL

AHL recommends that procurements commence as soon as possible to provide greater certainty to existing renewable resource owners. AHL argues New York needs to retain existing eligible resources and engage in smart procurement practices. Existing renewables, AHL asserts, are the cheapest renewables. According to AHL, replacing existing resources with new supply, such as OSW, would be costly. AHL argues new projects cause significant incremental environmental disruption relative to existing resources. OSW procurements, AHL continues, entail significant risk with timing, completion, and performance.

AHL recommends that bid caps should be made public as part of the solicitation documents. Failure to publicize the cap, AHL claims, will likely result in depressed prices in the first-round and higher prices in the third-round, assuming eligible resources have not been forced into the maintenance REC program by the time the third auction takes place. According to AHL, if the cap fails to consider the social cost of carbon in determining compensation for existing eligible resources,

NYSERDA will procure an inefficiently low-level of environmental attributes from existing eligible resources.

According to AHL, if all the generators select their best year of annual quantity production, it is likely that NYSERDA's quantity target will not be met. AHL argues that this issue can be addressed by limiting bidders to their demonstrated ten-year average production, excluding production from Tier 1 eligible upgrades, or the amount of Tier 2 production from their resource incorporated in the baseline.

In years when facilities produce more than their NYSERDA contracted amount, AHL continues, that excess can be sold into the voluntary market. AHL comments that hydropower stations produce significantly below their historic averages in drought years. AHL argues that two modifications are needed to the NYSERDA proposal: (1) generators with below-average production due to hydrology should be allowed to make-up any lost production in subsequent contract years, such that the contract is for a three-year total quantity, rather than three set annual quantities; and, (2) if at the end of the contract period the total quantity has not been produced, and drought conditions had prevailed for more than 12 months within the 36-month contract period, the contract would be extended by one year but only for the unfulfilled contract quantity.

AHL argues NYSERDA should commit to continuing annual procurement of a three-year contract, for one-third of the baseline, until a comprehensive carbon-pricing or alternative mechanism for providing value to existing eligible renewable resources is fully operational. If NYSERDA is unable to make such a commitment, NYSERDA should commit to a five-year, rather than a three-year, contract.

AHL argues that the ZEC program should be redesigned to encompass all new and existing zero-emitting resources on a

level playing field, and mandate LSEs in New York to procure ZECs directly from producers in proportions consistent with required targets. Under AHL's proposal, LSEs would be mandated to procure a portion of their requirements using five-year or longer contracts but would be free to design their hedging strategies as they saw fit. AHL argues that ACPs should then be set at the social cost of carbon. This ZEC approach, AHL continues, would represent a genuine commitment to the principle of applying competition in the procurement of zero-emitting attributes.

AMP and NP&L

AMP and NP&L support the Competitive Tier 2 program and believe that it is critical that the Maintenance Tier program work in tandem with the Competitive Tier 2 program. AMP and NP&L support the Brookfield and ACE-NY proposals regarding program structure, procurement volumes, program duration, and implementation timeline. AMP and NP&L believe that it is critical that the Maintenance Tier be flexible and that it provide longer-term contracts, up to at least 10 years, subject to the normal economic needs review. According to AMP and NP&L, CDG has offered an opportunity for existing small-scale renewable facilities to earn additional revenue through the Community Credit. With the expiration of the Community Credit, AMP and NP&L asserts that this opportunity will be lost unless additional credits are developed in the Value Stack, such as establishment of a Tier 2 Environmental Value.

Boralex

Boralex supports the establishment of a Competitive Tier 2 procurement program and supports the comments filed by

Environmental Entities in support of the establishment a Competitive Tier 2 program.

Brookfield

Brookfield recommends that the current and anticipated market conditions warrant the adoption of a competitive Tier 2 immediately. Brookfield asserts that the wholesale markets have not supported baseline resources. Brookfield argues that the low demand has been contributed to the problem but state subsidies to new renewable resources have exacerbated the problem, causing addition of new zero-marginal-cost resources that further depress pricing received by existing resources. Brookfield points out that many of the new renewable resources overlap the existing baseline generation and are in direct competition with each other. Brookfield states that the voluntary market opportunities have been limited. Further, Brookfield argues the State-backed voluntary REC purchases have given no preference to RECs generated from in-state baseline resources. Brookfield suggests a two-stage mechanism for Tier 2 in response to the NYSERDA Tier 2 Petition, with the first stage having NYSERDA procure a large volume (75-85 percent) of Tier 2 RECs, to be followed by NYSERDA offering those RECs to voluntary purchasers at a discount in the second stage.

Brookfield argues that the Competitive Tier 2 petition filed earlier this year fails to acknowledge the reality confronting existing baseline resources and the ambitiousness of the CLCPA's targets. Brookfield argues that the Competitive Tier 2 proposal leaves the baseline resources unsupported for five-year period leading up to the 2030 compliance deadline. Brookfield adds that non-contracted existing renewable resources are not compelled to sell their power or renewable attributes within New York, especially at a time when the state's neighbors

are aggressively seeking both. Brookfield claims that exports of baseline resources will only continue to increase.

Brookfield supports NYSERDA's Competitive Tier 2 program because they believe that there is an existing and growing risk to the State in pursuit of its goals if RECs are sold out-of-state into external renewable energy programs. Brookfield states that based on NYGATS 2019 data there is a 144 percent increase in non-NYPA hydroelectric RECs over 2018 hydroelectric REC exports and an increase of 56 percent of wind-exported RECs from 2018 to 2019. Brookfield points out the draft NYISO Gold Book forecasts decreasing supply, partly due to the impact of COVID-19. Brookfield argues that decreasing supply corresponding with lower wholesale market prices is a recipe for vital contributors to the State's baseline to either cease operating due to economic pressure or seek markets that put a better value on their attributes. Therefore, Brookfield requests the Commission to adopt a Competitive Tier 2 Program on an expediated basis.

Brookfield recommends that 75-85 percent of the available baseline, as defined by NYSERDA in its Petition, should be contracted for three years through the first solicitation, with subsequent solicitations procuring three-quarters of the available baseline.

Brookfield also proposes that the Commission direct NYSERDA to establish a Tier 2 REC resale process to make procured RECs available at a discounted price to the voluntary market and ESCOs seeking to comply with the ESCO Retail Market Reset Order. Brookfield argues that there are many benefits of the resale process such as more access to larger and consistent volume of RECs for LSEs and voluntary buyers, discounted pricing that reflects the premium that voluntary buyers are willing to pay for baseline RECs, and the promotion of CCAs and

facilitating ESCO compliance with the Commission's ESCO Retail Market Reset Order.

Brookfield suggests that their proposal will not modify NYSERDA's formula to determine LSE's obligation. Brookfield states that the subsequent resale process available to the voluntary market would reduce the numerator in that formula by offsetting NYSERDA's cost through REC resale revenues paid by the voluntary customers. The remaining lowered cost to NYSERDA would be allocated as contemplated, according to Brookfield. To ensure the success of the Program, Brookfield suggests NYSERDA will have to balance the price sensitivity of the voluntary market with their ability to partially offset Program costs to be socialized across ratepayers. Brookfield recommends that the confidential maximum bid cap, while remaining confidential, be either based on the replacement cost to add new resources in the place of lost existing resources or developed in consideration of external opportunity costs, such as the ability for baseline renewable resources to certify and sell RECs into renewable programs in other states and regions.

Brookfield points out that that timeline of the proposed program would leave a gap of four to six years from the end of the baseline resources' contracts to the first year of the CLCPA's renewable mandates in 2030. Brookfield argues that should baseline resources cease contributing to the baseline during that gap - either through retirements or exporting - it will be more expensive and/or too late to develop Tier 1 resources to make up the shortfall by 2030. Further, Brookfield argues that creating some assurance of a longer duration of support, will lead to investments in capital projects, major repairs, and investments to keep projects operating that may require more than 3 years to justify. Brookfield recommends

that the program should be extended through 2030, with the caveat that the Commission conduct a Program review after 2025.

Brookfield argues that the \$200 million program cap is arbitrary and unsupported by analysis. Instead, Brookfield recommends that the total program cost should be based upon how many MWh are offered below the confidential bid cap, up to the target volume being sought by NYSERDA. While eligibility for solicitations should still be based on individual facility characteristics, Brookfield suggests that solicitations should allow for generator owners to execute contracts that allow for multiple facilities to be aggregated together to contribute to a total bid quantity, provided common ownership across the aggregated facilities. Brookfield states that this way would substantially reduce the administrative burden on NYSERDA since generator owners typically own multiple facilities and allow generators greater flexibility in managing their portfolio and commitments.

The City

The City expresses concern regarding NYSERDA's Petition and argues the Commission should require NYSERDA to provide additional information regarding the need for additional funding for existing renewable resources beyond the existing Tier 2 Maintenance program. The City also suggests the Commission to explore a way for the Northeastern states to collaborate on renewable resource planning and procurement strategies. Such planning efforts could explore establishing a regional price for environmental attributes. Doing so would avoid the competition among the states for renewable resources. The City argues that the successful Regional Greenhouse Gas Initiative (RGGI) program model provides a good platform for this effort.

The City urges the Commission to require NYSERDA to submit additional information to justify its proposal by including "the need that the payments are intended to address, the basis for the proposed payment level, the basis for the proposed three-year term, the rationale for providing funds in addition to the existing Tier 2 Maintenance program, the potential cost impacts to customers, and any analysis NYSERDA relied upon in developing the proposal." Also, the City requests clarification as to why a uniform level of funding should be provided to every resource, given the unique characteristics of each resource type.

The City states that it would be appropriate to evaluate alternative ways to address the needs of this proposal, such as the Commission's pending Resource Adequacy Proceeding, and the NYISO consideration of additional market products to address the evolving electric system. The City requests that the Commission direct NYSERDA to provide additional information regarding the need for additional funding, and allow interested parties to review and comment, prior to taking further action on the Petition.

CEA

Due to the new goals of the CLCPA, CEA supports the creation of a competitive Tier 2 program to preserve existing baseline renewable generation. CEA explains that any existing renewable generation selling to neighboring markets cannot be counted toward the CLCPA goals. CEA argues that there is a significant risk of existing renewable generation selling their attributes out of state. CEA states that through 2024, there is a potential of 1,300 MW of wind renewable generation will be able to sell to other markets. Therefore, CEA recommends that the Commission establish a mechanism to ensure that renewable

attributes from existing CLCPA-eligible renewable energy systems continue contributing to CLCPA electric sector goals. CEA suggests only CLCPA-eligible resources be eligible for the Tier 2 program. CEA opposes allowing out-of-state resources to participate.

CEA argues that there is not sufficient information to evaluate the voluntary market as it relates to NYSERDA'S maximum bid price. Therefore, CEA posits that only awarding one-third of baseline units will lead to potential retirements. CEA argues that NYSERDA's procurements should target the approximate number of RECs it determines are eligible and not currently participating in the voluntary market. CEA argues that a total budget cap is unnecessary given the use of a confidential maximum bid price, thereby ensuring all bids under this cap would be cheaper than new generation.

ESFPA

ESFPA argues that the Competitive Tier 2 program should be open to all baseline renewable generation, including bioenergy, to meet this goal. ESFPA states that New York risks losing generation to other states through exported RECs because of the limited three-year program and confidential maximum bid price ceiling proposed in the Petition. It notes that such a situation could impair the achievement of CLCPA goals. ESFPA also asserts that the Tier 2 contracting structure fails to ensure that existing renewable resources will remain in-state to contribute to energy policy targets, noting that contracts would end by 2025. Without contracts through 2030, ESFPA states that generators would retire or sell energy out of state, possibly putting the ambitious renewable energy mandates of CLCPA in jeopardy.

Energy Ottawa

Energy Ottawa endorses the establishment of a Competitive Tier 2 program to maintain the viability of baseline renewable resource and achieve State energy policy goals. It identifies additional actions it claims will ensure the viability of the renewable generation baseline and bolster efforts in achieving CES goals.

According to Energy Ottawa, New York is at risk of eroding its renewable baseline through the export of RECs to out-of-state markets. Energy Ottawa contends that depressed prices and revenue streams in the New York energy and REC markets represent a significant economic challenge to baseline renewable generators in the face of operating and capital costs, as well as the financial and administrative burden of the Federal Energy Regulatory Commission (FERC) relicensing process. It notes that these circumstances are worsened by collapses in fossil fuel prices and the ongoing public health crisis, creating a situation in which it may prove uneconomic to operate facilities. Energy Ottawa urges the Commission to authorize the Competitive Tier 2 program to support the viability of renewable baseline resources. Furthermore, Energy Ottawa recommends that the Competitive Tier 2 program launch in 2020 as proposed by NYSERDA, claiming that more urgent adoption will allow NYSERDA to implement the program under the planned timeframe to meet state policy goals.

Energy Ottawa states that the proposed \$200 million funding cap is arbitrary and without merit. As alternatives for controlling program costs and achieving the most cost-effective implementation, it requests that the Commission consider the use of a confidential maximum bid price informed by the prevailing Tier 1 REC price and periodic review of the Tier 2 program in

terms of efficiency, effectiveness, and costs as cost control measures.

Energy Ottawa recommends aligning the Competitive Tier 2 program with CLCPA targets by administering it through 2030, rather than the series of three-year contract periods proposed by NYSERDA. It argues that extending this timeline through 2030 will help ensure the continued operation of baseline resources in an uncertain economic and policy landscape.

According to Energy Ottawa, the Competitive Tier 2 program should mandate NYSERDA to procure a specific number of RECs and require a higher percentage of the available baseline than was proposed in the Petition. It cites the comments of Brookfield and ACE NY as compelling arguments for requiring NYSERDA to procure 75 percent of the available baseline annually. Energy Ottawa also supports the eligibility requirements for qualifying baseline renewable resources under the Competitive Tier 2 program proposed in the Petition. Finally, Energy Ottawa states that REC procurements under the Competitive Tier 2 program should allow generators that operate portfolio assets to consolidate commonly-owned facilities on single bids.

HQUS

HQUS states their facilities contribute a very significant portion of energy towards the renewable baseline. In addition, HQUS states it has flexible and dispatchable characteristics that will be required by New York to integrate a higher penetration of intermittent energy into the bulk electricity system if appropriate price signals are in place. HQUS argues that securing existing renewables likely represent one of the most cost-effective tools available to the state in meeting its targets, since any loss of existing resources will

need to be replaced by new renewable generation which will likely represent a higher cost to ratepayers. HQUS notes that the CLCPA limits eligibility to non-state hydropower and wind facilities. HQUS argues that this limitation does not appear to be aligned with the CLCPA or the objective of cost effectively maximizing renewable generation to serve New York State. HQUS recommends that eligibility for a Competitive Tier 2 program should be established based on the technology requirements specified in the CLCPA with no geographic restrictions outside of the ability to physically deliver energy and associated attributes into the New York control area.

Gravity

Gravity states that if New York's baseline resources are not preserved, New York would be required to invest in more expensive new renewable facilities to meet the mandate of 70 percent renewables by 2030 and 100 percent zero emissions electricity by 2040. Gravity argues that NYSERDA's proposal is a step in the right direction, but that there are key elements of the proposal that fall short of meeting the need of existing resources. Gravity argues a permanent solution is needed to preserve crucial baseline resources. According to Gravity, NYSERDA's proposal would only provide Tier 2 compensation for three years of the five-year program. Additionally, Gravity proposes that location and deliverability criteria for Tier 2 resources should be consistent with Tier 1 resources, and the eligibility of the environmental value attributes for net metered or distributed resources should be revised to include Tier 2 resources.

Gravity argues that NYSERDA's proposal is insufficient for providing the compensation need to preserve the baseline renewable resources and to keep them in New York. Gravity

argues that a program that provides longer-term, stable pricing to existing resources at a discount from Tier 1 prices would allow continued operation of existing facilities in New York, at a lower cost than replacing exported or retired resources with new resources.

Gravity argues that a permanent, long-term solution is needed to preserve crucial baseline resources, and that NYSERDA's proposed 3-year program will not provide the stability needed to make the large investments to preserve the baseline resources. Gravity argues that existing facilities should be compensated fairly for the environmental benefits that they provide for the entirety of the Tier 2 program.

Gravity states that NYSERDA's proposal for a Competitive Tier 2 specifies eligible facilities as existing non-state-owned run-of-river hydropower and wind generators located within New York and notes that the Clean Energy Standard (CES) allows Tier 1 resources to come from control areas adjacent to the NYISO, if the electricity associated with the RECs is scheduled, transmitted, delivered, and settled in the NYISO and the appropriate unit-specific documentation is provided. If existing resources that were operational prior to January 1, 2015 are delivering energy and RECs to New York, Gravity continues, then they are providing the same carbon-free benefits to New York as imported Tier 1 resources. Gravity argues that out-of-state existing resources should be compensated for the benefits they provide and be eligible for any Tier 2 program that is in place, regardless of when their first date of energy import occurred.

Gravity argues that upon implementing the Competitive Tier 2 program, the eligibility for the Environmental Value compensation as part of the Value Stack should be extended to Tier 2 resources. Gravity agrees with the ACE NY's comments on

the proposed \$200 million cap with ACE NY's proposal regarding the maximum bid price. Gravity states that the methods of calculating the caps should be transparent to all parties prior to program implementation.

Gravity argues that the Tier 2 program should assess the eligibility of each facility individually and award each contract based on the bid submitted by the facility. Gravity recommends that the MW eligibility limit should be expanded from 10 MW to 30 MW to preserve more of New York's important small baseline generators, noting that neighboring states define eligible renewable facilities as small facilities with a nameplate capacity of not greater than 30 MW.

IPPNY

IPPNY states that the significant reduction in the baseline from in-State resources exporting their power out-of-State should be resolved to preserve the pre-existing clean energy baseline. IPPNY urges the Commission to rule on the Competitive Tier 2 program as soon as possible but no later than in its expected October 2020 order addressing the White Paper.

IPPNY supports, as a short-term measure to meet the CLCPA's goals, allowing existing renewable resources within this state to be eligible to participate in the Competitive Tier 2 Program. IPPNY urges the Commission's adoption of a Competitive Tier 2 Program for existing renewable energy resources within this State to retain the benefits of those facilities for the economies of host communities and preserve their role within the State's renewable energy baseline. IPPNY suggests that the competitive program for existing renewable facilities remain in place until an alternative market-based mechanism, such as carbon pricing, is established to value emissions-free electricity and obviate the need for such a Tier 2 program.

Joint Utilities

The Joint Utilities claim that the Competitive Tier 2 program Petition is not an appropriate long-term solution and urge the Commission to reject it. They outline five arguments against approval of the proposed procurement.

First, the Joint Utilities charge that post-contract REC payments from electricity customers to existing renewable resources constitutes an inappropriate shift of risk and cost to customers for the potential benefit of merchant plant owners. Specifically, they allege that state sponsorship of Tier 2 REC procurement is likely to provide ongoing out-of-market payments to renewable resource owners, despite the low ongoing and variable costs of some operations.

The Joint Utilities claim that the Petition is inconsistent with carbon pricing and other market mechanisms and would distort the market with subsidies. They argue that carbon pricing offers a more transparent, market-based solution for compensating renewable resources. The Petition also conflicts with voluntary programs and would raise their cost, the Joint Utilities claim. They predict detrimental effects on REC availability for the Green Tariff programs and urge the Commission to promote and expand these and other voluntary, unsubsidized programs, such as CCA. The Joint Utilities express concern that the Petition could create bidding competition between NYSERDA and out-of-state entities, generating higher prices for ratepayers necessary to counter market pressure from neighboring states.

Furthermore, the Joint Utilities state that a review of the Main Tier procurement is warranted to consider other approaches to providing in-state clean energy resources, including utility ownership. They claim that utility ownership

offers a lower-cost business model that would benefit ratepayers by obviating the need for subsidies in the form of continual REC payments. The Joint Utilities suggest that, in particular, utility ownership of renewable resources could be used to benefit mass-market or low-income customers.

While the Joint Utilities urge the Commission to reject the Petition outright, they also propose several modifications should the Commission choose to approve it. Citing changing market conditions, they recommend a thorough reassessment of REC procurement methods to examine the potential market benefits of supplemental actions like carbon pricing and utility ownership in reaching ambitious state energy policy goals. The Joint Utilities also advocate the adoption of regulatory measures to avoid artificial price increases from competitive pressure from out-of-state entities, perhaps established based on historical REC prices and other market trends.

Finally, the Joint Utilities recommend that remaining Tier 2 RECs should be assigned pro rata to all LSEs (both energy supply companies and public utilities) after accounting for sales to voluntary programs. They propose that utilities would include their share of these costs in the supply section of the bill. According to the Joint Utilities, this arrangement would be comparable to the Zero Emissions Credit program in that all customers would pay a proportionate share of supplemental procurement costs.

In reply comments, the Joint Utilities oppose allowing NYPA facilities to be eligible for Tier 2 RECs and urge the Commission to support a voluntary market for these facilities. The Joint Utilities agree with IPPNY's recommendation to support a market-based approach to recognize the value of clean energy. The Joint Utilities disagree with ACE-NY's proposed treatment of

repowered generation and support a more market-based and cost-effective solution than NYSERDA's proposal.

Specifically, the Joint Utilities argue that the NYSERDA Tier 2 program's intent was to support existing renewables that can sell RECs out of state. However, the Joint Utilities point out that NYPA should not be allowed to sell RECs out of state as a government entity and shares responsibly to support the goals of the CLCPA.

The Joint Utilities disagree with Brookfield's proposal that NYSERDA should procure 75-85 percent of available MWh from eligible facilities in each solicitation for a resale process to allow LSEs and voluntary buyers access to RECs at a discount for voluntary programs. The Joint Utilities are concerned that this proposal would further accelerate the shift of risk, and costs, of these projects to customers. Instead, the Joint Utilities support the growth of a robust voluntary market for these resources. If the Commission should act on Brookfield's proposal, the Joint Utilities urge the Commission to act in a limited fashion and adopt that part of Brookfield's proposal that NYSERDA offer Tier 2 for resale for entities offering voluntary programs to customers.

The Joint Utilities urge the Commission to reject ACE NY's recommendation to treat all the output from existing repowered facilities as a Tier 1 resource and continue to direct financial support through the Tier 1 RECs to existing resources when it determined that only resources in operation after January 1, 2015 are eligible for Tier 1 RECs. The Joint Utilities believe ACE NY's proposal could result in gaming opportunities from a partial repowering and result in a windfall for many resources that are likely to have been fully depreciated. The Joint Utilities urge rejection of various other recommendations to expand NYSERDA's proposal to add

categories of generation resources and extend its limits as an unwarranted expansion of an already flawed proposal.

Joule

Joule supports NYSERDA's Petition for the Competitive Tier 2 Program with modifications. According to Joule, adoption of NYSERDA's proposal without modifications would hike the CCA price for RECs to higher than \$6 per MWh. A \$6 price premium for each MWh of renewable generation would simply price CCAs out of the renewable market, according to Joule. Joule asserts that all Joule Assets communities and most of Westchester Power communities currently default to renewable power at a price of \$2.50 to \$3 per MWh for NYGATS registered RECs.

Joule supports the general goal of the Clean Energy Advocates' comments; however, argues their proposed solution would be unworkable. According to Joule, CCAs will be left with the most expensive market resource while NYSERDA will have procured the least expensive. Joule argues that Brookfield's approach is best. According to Joule, if NYSERDA was to purchase 7 MWh of RECs, then offer these at a fixed or capped price to CCAs, and ESCOs, through a re-bid or open offer, this approach would not be in competition with the market and it would allow for the current rapid growth of that market. Joule states that their calculation for the fixed or capped price could be as high as \$3 per MWh, more than half, if a pay-as bid market were to clear at \$6. Joule argues that this would seriously mitigate any general ratepayer burden.

Joule states that the NYPA proposal to qualify its resources as Tier 2 eligible, would provide further growth opportunity for the industry. NYPA's 2019 authorization to develop generation to serve CCAs and making Tier 2 RECs available to the CCA community, could help in the further

development of CCAs, long-term contracts, and Tier 1 RECs. Joule does not support the Joint Utilities suggestion of permitting utilities to develop renewable power plants. According to Joule, current proposals hold the potential to atrophy the competitive market, create competition between utilities, free-market ESCOs and ESCO products, create interconnection procedures that offer equal access only in theory, and return the State to a vertically-integrated environment.

MEGA

MEGA states that as the administrator of a CCA program, it routinely interacts with municipal officials wishing to provide better energy choices for residents and small businesses. MEGA adds that as CCA programs expand in New York State, more and more communities have expressed a desire to connect residents with renewable electricity options. However, it warns that the rising prices of Tier 2 RECs is stopping communities from pursuing CCA further. Accordingly, it is in support of a program that would reduce the cost of Tier 2 RECs to alleviate the disproportionate financial burden on residents and small businesses. It concludes that while green CCAs are a powerful tool in helping New York State reach its clean energy goals, current pricing is prohibiting communities from pursuing this option and that every effort must be made to keep this important program viable for communities and residents.

Multiple Intervenors

Multiple Intervenors does not support the Tier 2 program on the basis that those renewable generators who received legacy RPS contracts should not be rewarded again with Tier 2 funding. As pointed out by Multiple Intervenors, the

Commission previously stated its intention that renewable generators should not be funded by ratepayer programs in perpetuity and that upon completion of RPS contracts, the energy markets should be the vehicle to determine subsequent funding. Multiple Intervenors also points out that the proposed Tier 2 would not be based upon need as the current Tier 2 Maintenance program is.

Multiple Intervenors states that it has urged the Commission several times to consider cost impacts of the CES, which they warn could impose excessive or unnecessary costs on customers. Multiple Intervenors expresses serious concern about the expansion of subsidies paid to existing renewable generators and the authorization of \$200 million in incremental collections to fund the Competitive Tier 2 program, which will result in further financial strain on captive customers. For these reasons, Multiple Intervenors urges the Commission to reject the Petition, or, should the Commission approve the proposed program, modify it so that it is funded through existing sources of collected, uncommitted funds, rather than collecting additional balances from customers.

Multiple Intervenors outlines three primary concerns with the Petition. First, Multiple Intervenors argues that the Petition will provide a windfall to existing generators, including those already subsidized through long-term RPS contracts. Multiple Intervenors argues that these RPS subsidies should represent the total amount of customer-funded financial assistance provided to renewable generation projects as determined by owners at the time, and no additional funds should be required now. Multiple Intervenors also notes the unspecific language of the Petition regarding eligibility, which excludes generators with existing NYSERDA contracts but fails to address previously subsidized generators with completed contracts,

creates a situation in the latter that could potentially apply again to receive additional revenues from customer-collected funds. Multiple Intervenors states that this repeated subsidization of the same facilities should end, particularly in circumstances in which no demonstrable economic need exists. Multiple Intervenors states that the original purpose of the CES Tier 2 program was to bolster existing renewable generators that could not survive without customer subsidies, not to grant additional financial benefits to profitable generators already funded under the RPS.

Multiple Intervenors raises several concerns about cost impacts to customers in their second objection to the Petition. Multiple Intervenors states that it has repeatedly advocated for assessment of additional utility spending in the context of all other policy initiatives to minimize cost impacts on customers and ensure cost-effectiveness, rather than considering incremental funding requests in isolation. Multiple Intervenors strongly cautions against further outlays of customer-collected funds, citing the looming economic effects of the current public health crisis and providing a description of the major energy policy initiatives already supported by ratepayers. It is in the best economic interest of customers, Multiple Intervenors contends, to avoid imposing additional economic burdens on customers with the policies proposed in the present Petition, especially the subsidization of existing generators, some of which have already received customer-funded support. Finally, Multiple Intervenors reiterates their requests that the competitive Tier 2 program be rejected, and failing that, any approved program should be modified to be funded initially through existing NYSERDA funds.

NHA

NHA supports a competitive Tier 2 program that provides adequate support of existing resources and states its concern regarding the exporting of existing non-NYPA hydroelectric RECs. It argues that any Tier 2 program should incent these generators to keep their resources in-state and part of the renewable baseline. NHA further posits that NYSERDA should target 75-85 percent of the available MWhs from eligible baseline renewable resources, consider allowing the resale of Tier 2 RECs to provide the voluntary market and LSEs access to lower cost RECs, take into account Tier 1 REC prices or the opportunity costs placed on sellers by REC markets in neighboring jurisdictions in any bid cap, continue the Tier 2 program through 2030 to allow for longer term investment decisions, and allow for offer flexibility for resources owning multiple facilities to be aggregated.

Nucor

Nucor states that the proposed Tier 2 program to be unnecessary and supports continuation of the current maintenance program based on demonstrated need of a facility's "to-go" costs of continued operation, as modified in the 2018 CES Baseline Order. Nucor argues that a genuine need for the proposed Competitive Tier 2 program has never been established, and it would place a substantial incremental burden on New York consumers and businesses.

NYPA

NYPA argues that the exclusion of NYPA baseline hydroelectric generation from the Competitive Tier 2 Program could lead to reduced generation and a corresponding increase in the amount of new renewable generation necessary to meet State policy objectives. NYPA argues that the Commission should

define generation from NYPA's existing hydroelectric facilities as Tier 2 eligible. NYPA points out that its hydroelectric generators represent 53 percent of statewide installed renewable capacity and provided 73 percent of annual statewide renewable electric generation. NYPA argues that inequitable treatment that bars certain renewable generators from receiving market-value compensation for their RECs ultimately will make it harder to achieve the State's clean energy goals. Further, NYPA argues that the lack of opportunities may lead generators to sell their renewable energy and associated RECs to out-of-State markets which could decrease the baseline.

NYPA request that their baseline hydroelectric generation should be defined as Tier 2 eligible resources. Additionally, NYPA states that it will not participate in NYSERDA's proposed initial three-year Tier 2 solicitations and will work with its customers on retiring its Tier 2 RECs. However, NYPA states that defining its resources as Tier 2 eligible would give NYPA the flexibility to participate in subsequent Tier 2 procurements, and to benefit ratepayers, should such participation be warranted by future market conditions. NYPA contends that all existing resources that will contribute to achieving the CLCPA goals should be recognized and treated equally under any program that supports their operation to avoid placing resources at a disadvantage. NYPA requests the Commission qualify NYPA's baseline hydroelectric generation as Tier 2 eligible to appropriately recognize its contributions to the CLCPA goals. NYPA posits that renewable generators ineligible to sell RECs will have to submit comparatively higher bids into the NYISO market and to be selected for electric supply, as the amount of renewable capacity increases. If state-owned renewable resources are not eligible to sell RECs, these pressures ultimately will impact the operation of NYPA's

renewable fleet and potentially decrease output. NYPA suggests that any decrease in generations would result in a corresponding increase in the volume of new renewable generation, and the associated ratepayer impact of an increased new renewable REC obligation.

If NYPA and its customers voluntarily assumed Tier 2 obligations without NYPA asset eligibility, NYPA explains, its customers would be paying to support both NYPA's baseline renewable resources they purchase power from and other non-NYPA baseline renewable resources. NYPA argues that non-NYPA customers would not be supporting the costs of operating and maintaining NYPA's baseline generation resources. If NYPA's baseline hydroelectric generation is deemed Tier 2 eligible, NYPA says they will work with its customers to implement any necessary contract changes in a manner that is sensitive to NYPA's statutory objectives and requirements, including economic development. Moreover, if NYPA's fleet is not deemed Tier 2-eligible, it could undermine the legislative intent underlying economic development programs.

In its reply comments, NYPA states that the Joint Utilities' comments relating to NYPA's business practices is a misrepresentation of NYPA's comments. NYPA explained that ineligibility for the proposed Competitive Tier 2 program could lead to NYPA hydroelectric units being selected to run in the NYISO. NYPA is concerned that is scenario will erode the existing baseline of renewable generation that the proposed Competitive Tier 2 Program is designed to preserve, thereby increasing ratepayer costs by requiring the procurement of more Tier 1 RECs from new, more expensive resources. NYPA notes that NYPA customers, including those participating in economic development programs that are designed to attract and retain jobs and capital investment in New York State through low cost

power will see increase costs. As NYPA stated in its initial comments, it will not seek to participate in NYSERDA's proposed initial 3-year solicitations. NYPA states it would not seek to participate in any subsequent Tier 2 solicitations unless the Commission and NYSERDA first determine that such participation would be in the best interest of New York ratepayers. Until such time, NYPA's argues its participation in the proposed Competitive Tier 2 Program would be limited to developing new voluntary green power products for its customers and self-supplying the Tier 2 RECs necessary to voluntarily meet its Tier 2 obligation as an LSE.

NYPA notes that Joint Utilities argue that because NYPA doesn't pay into the state's clean energy programs, it should not be permitted to participate in the CES Tier 2 program paid for by New York utility customers. NYPA contends that this concern is irrelevant and misses the objective of the Tier 2 program and NYPA's request which does not propose to condition Tier 2 eligibility on whether an existing generator pays, or does not pay, to support any clean energy policy program. NYPA states that this requirement is not a condition on eligibility for any of the Renewable Energy Standard programs administered by NYSERDA. Further, NYPA adds that policy programs designed to support large capital investments with statewide benefits have not required such contribution. The Joint Utilities provide no explanation of their position why such contribution should be required or why NYPA should be held to a different standard than other generation owners.

ReEnergy

ReEnergy does not believe that the proposed structure of Tier 2 contracting goes far enough to ensure that existing renewable resources will remain in the state to meet the mandate

of 70 percent renewable generation in 2030. ReEnergy argues the mandate continues to 2030, longer than the proposed timeline of the program. Further, ReEnergy states that if the State refuses to solicit RECs for 10 to 20 years from existing resources through an RFP, an alternative approach could be to allow market pricing that encourages the generators to keep RECs within the State. To compete with neighboring states, ReEnergy proposes NYSERDA should procure RECs in an open and transparent manner that can compete with this alternative. ReEnergy adds that a three-year maximum volume procurement with a hidden artificial price ceiling is not an open and transparent mechanism. ReEnergy maintains that the State risks losing these generators to other states due to lack of flexibility. Lastly, ReEnergy recommends allowing all types of existing renewables to continue serving the State.

Sustainable Westchester

Sustainable Westchester notes that community-choice aggregation customers may be willing to pay a modest premium for clean energy products but would likely withdraw if added costs become too great. Sustainable Westchester agrees with the proposal to authorize NYSERDA to resell the Tier 2 to ESCOs or directly to CCAs, but requests that it does this at discounted prices that reflect the limited ability of CCA customer to absorb premiums.

Valcour

Valcour supports a Competitive Tier 2 program and argues the competitive and transparent solicitations will increase the amount of existing renewable energy attributable to State policies, as well limiting the cost and risk exposure for New York consumers. Valcour recommends that the contract term

should run through 2030 to coincide with the CLCPA goals. Valcour suggests that a ten-year term would provide an alternative hedging opportunity for existing resources that may compensate for other programmatic limitations. Valcour argues that the \$200 million program cap is insufficient to prevent Tier 2 resources from exporting to more lucrative markets. Valcour believes that success in complying with the 2030 goals requires a procurement structure that casts a much wider net than only those resources that are unable to pursue other markets and remain competitive with other markets. Valcour points out that RECs in structured markets that border New York are significantly more valuable than the Petition is likely to create for the Tier 2 solicitation.

Valcour argues that the proposed program lacks sufficient transparency for the development of competitive bid prices. Valcour does not support the use of the confidential maximum bid price. Valcour states that it may be useful for Tier 1 solicitations but Tier 2 projects have different financial needs and will have greater discretion to bid as low as necessary to obtain a contract. Without any market reference, Valcour anticipates resulting prices that are artificially low and insufficient to discourage flexible suppliers from exporting to more transparent and valuable markets in neighboring states.

A. Procurement/Resale of Tier 2 RECs

Environmental Entities

Environmental Entities argues that the resale of Tier 2 RECs to the voluntary market should only be authorized if a high percentage of the Tier 2 pool is procured each year. The first Tier 2 solicitation should be issued by the each of 2020.

Avangrid

Avangrid suggests NYSERDA design the Tier 2 procurement schedule and quantity in such a way to maximize the likelihood that the desired amount of the current and projected portfolio of existing resources will remain sustainable and eventually become available for repowering into Tier 1-eligible resources.

Brookfield

Brookfield argues that if the Commission allows NYSERDA to resell Tier 2 RECs under such a design, it would compound the problem for renewable baseline resources, as unprocured renewable resources would now be competing with NYSERDA within the voluntary REC market. Brookfield proposes that NYSERDA procure a large portion of the baseline (75-85 percent) to make sure a large portion of the baseline receives immediate support while also preserving a level of competition within the procurement. Moreover, Brookfield states that much of that remaining supply would end up being procured in the subsequent auction and therefore, most of the renewable baseline would find itself selling RECs to NYSERDA, not competing with it. Brookfield argues that this proposal allows NYSERDA to bridge that gap in a way that supports the renewable baseline as well as voluntary buyers, and, defrays some of the cost obligations the program would place on LSEs by having a portion of NYSERDA's costs covered by the resale of the RECs.

City of Albany

City of Albany supports the reselling of Tier RECs to the voluntary market at a discount. The City of Albany has seen REC prices double within the last year. The City of Albany

supports the comments submitted by Brookfield. The City of Albany argues that it is important for the state to help protect initiatives such as CCA during this rollout.

LIPA

LIPA agrees that NYSERDA should be authorized to resell Tier 2 RECs on a voluntary basis if it has the opportunity and it does not increase costs to or eliminate any opportunity to reduce costs from LSEs that are required or expected to participate in NYSERDA's proposed Tier 2 RECs program.

REBNY

REBNY also strongly supports allowing NYSERDA to resell Tier 2 RECs to voluntary purchasers, including building owners, as proposed in the White Paper.

B. NYPA's Role

CEA

CEA argues that NYPA's request to participate in the Tier 2 program appears premature because limited information is available. CEA suggests extending the Maintenance Tier program to NYPA facilities that are financially in need. CEA expresses concern about the cost to jurisdictional ratepayers if the Commission determines that Tier 2 eligibility is preferable to other alternatives. CEA notes that the share of statewide load for which NYPA would retire Tier 2 RECs is much smaller than NYPA's share of baseline renewable generation that would generate Tier 2 RECs. CEA argues that it is not clear what the size of NYPA's Tier 2 REC offering would be or where costs not borne by the voluntary market would ultimately fall. CEA

recommends that any decision by the Commission should address the issue of cost to ratepayers.

Joint Utilities

The Joint Utilities have consistently opposed NYPA's participation in these solicitations. The Joint Utilities argue that NYPA, as a governmental authority, shares responsibility for meeting the State's clean energy goals and its hydropower units face no risk of retirement and/or leakage through sales of attributes to out-of-state markets. The Joint Utilities see no public interest reason to allow NYPA's hydropower resources to participate in the Tier 2 solicitations or self-supply to avoid paying for its fair share of future Tier 2 obligations. The Joint Utilities suggest that should the Commission permit NYPA to participate in the Tier 2 solicitations, fairness considerations dictate that the Commission recognize that NYPA resources, be used to reduce future compliance requirements for all LSEs.

LIPA

LIPA argues that should NYPA's baseline generation is deemed Tier 2 eligible, LIPA proposes that Tier 2 eligible resources, which are proposed to include "non-state-owned run-of-river hydropower and wind generators that entered commercial operation prior to January 1, 2015" be expanded to broadly include "renewable energy systems," most notably solar. LIPA notes that they should be equally deserving of the opportunity to participate in this program.

Multiple Intervenors

Multiple Intervenors posits that NYPA customers already fund its voluntary renewables obligations through their

contracts for NYPA power and therefore should not be required to also fund a competitive Tier 2 program. Multiple Intervenors states that despite funding approximately 15 years of mandated, customer-funded subsidies of renewable generation facilities, NYPA still has the resources to be the largest owner/operator of renewable generation in the State. If its facilities are not eligible for the Competitive Tier 2 program, NYPA could be placed at a competitive disadvantage relative to those generators that do qualify for Tier 2, and any economic benefits to customers associated with low-cost NYPA hydropower could be eroded.

NHA

NHA underscores NYSERDA estimates that NYPA's hydropower facilities account for approximately 55 percent of baseline renewable resources and warns that by including hydropower resources in the baseline while restricting its participation in the CES, the state is assuming the hydropower fleet will remain economical to meet ambitious environmental goals. This assumption places unnecessary risk on ratepayers that these resources will remain viable for decades to come. It argues that NYPA's fleet of hydroelectric resources are vital to New York State's CLCPA goals and that its resources should be treated on equal footing to other Tier 2 baseline resources.

NYPA

NYPA argues that environmental attributes from NYPA-owned resources should be deemed equivalent to environmental attributes from NYSERDA CES procurements for purposes of NYPA self-supplying. It explains that the environmental attributes from NYPA's hydroelectric units contribute to the State's renewable energy goals in equal measure to any other baseline

renewable resource, but they are not deemed equivalent to other hydroelectric RECs under the proposed Competitive Tier 2 Program. NYPA continues to state that as a matter of equity for NYPA customers, the Commission also should recognize that if NYPA voluntarily assumes a Tier 2 target, all RECs produced by existing renewable resources, including NYPA hydroelectric resources, would have equal value under the proposed Competitive Tier 2 Program. It adds that precluding NYPA from self-supplying Tier 2 RECs to its customers could result in additional costs imposed on NYPA's economic development customers, contrary to the intent of the programs and that critical to the requirement that NYPA provide low-cost power to these customers is the ability to limit unit costs by maximizing the volume of power sales used to recover costs.

NYMPA

NYMPA opines that NYPA's hydroelectric fleet should be eligible to produce Tier 2 RECs to be used for compliance with a Tier 2 NYPA obligation and supports NYPA's proposal, if the Tier 2 RECs generated by NYPA can be used for compliance by NYMPA members. It explains that if its members were required to pay for Tier 2 RECs like other LSEs, its members would be supporting not only NYPA resources, but also a load ratio share of all other Tier 2 eligible resources in the state. This is not equitable according to NYMPA.

NYAPP

NYAPP states that the CES should not preclude NYPA from receiving RECs, and that such RECs should be specifically encouraged and authorized consistent with NYPA's hydropower assets. In turn, NYAPP concludes that the Commission-jurisdictional NYAPP members should be permitted to

utilize environmental attributes associated with the hydropower they purchase to meet their REC obligations.

Nucor

Nucor argues that expanding the proposed Competitive Tier 2 to include existing NYPA facilities is unwarranted.

Sustainable Westchester

Sustainable Westchester agrees with NYSERDA that NYPA resources should be eligible for Tier 2 qualification. Citing the recent authorization for NYPA to procure electricity for CCAs, it suggests that NYPA could commit to make Tier 2 RECs available to CCAs to further the development of this shared purchasing model.

VI. New Tier 4

A. Eligibility

Boralex

Boralex recommends that resources that are eligible for Tier 4 should be as defined in the White Paper, including any utility scale project interconnected in Zone J, as well as new transmission projects backed by generation that meets the additionality requirements. Boralex argues these eligibility criteria cast a wide net to encourage competition in achieving the Tier 4 goals. Boralex agrees that Tier 4 should be limited to non-hydropower projects that have a commercial operation date on or after the date of any Commission order and for eligible hydropower projects that meet the White Paper's additionality requirements. Boralex suggests that unconstructed wind or solar

projects should be eligible to apply for Tier 4 irrespective of whether they hold a NYSERDA RES contract or were previously the subject of an award by NYSERDA. If a Tier 4 offer is not accepted by NYSERDA, Boralex suggests such projects would retain their existing NYSERDA RES contracts and if a Tier 4 offer is accepted, NYSERDA would covert the Tier 1 contract into a Tier 4 contract. Boralex asserts that applying the minimum threshold viability criteria to such proposed renewable energy projects would be a straightforward way of assessing if additionality will truly be met. Further, a detailed compliance plan would ensure that the energy and GHG baseline additionality requirements would be achieved in a manner consistent with the Commission's intentions.

CEA

CEA supports Tier 4 but opposes the eligibility limit described by Staff in the White Paper that would exclude "any hydropower impoundment not already in existence or under construction as of the date of issuance of this White Paper".

CET

CET supports NYSERDA's proposed eligibility requirements for Tier 4 RECs, particularly the inclusion of hydroelectric resources that are not currently eligible under Tier 1. CET also supports the proposed Tier 4 deliverability requirements, including the eligibility of resources delivered into the City, or Zone J, via new transmission interconnections. CET argues it is important to align the eligibility requirements for Tier 4 RECs with the eligibility requirements for Local Law 97, such that projects receiving Tier 4 RECS shall also be deemed to comply with Local Law 97.

CPA

CPA states that it is cautiously optimistic regarding Tier 4 but argues strongly that eligible resources must be required to participate in the NYISO's Load Zone J capacity market. It is concerned by the proposal in the White Paper that a resource need not participate in the Zone J capacity market to generate Tier 4 RECs. Without this requirement, in-City fossil-fueled generation will not be able to safely retire and the State's climate goals will remain elusive. Going further, CPA argues Tier 4 should give special consideration and weight to projects that would provide dispatchable resources to New York City.

CPA adds that New York City's energy demand is currently met predominately by natural gas which leaves consumers with few options in the event of a shortage and that a well-designed Tier 4 will have the effect of increasing the heterogeneity of New York City's energy mix and improving reliability as a result. CPA opines that NYSERDA should work to ensure that Tier 4 results in additional renewable energy capacity, not cost shifting from one market to another, and to that end, should amend its criteria that Tier 4 RECs would only be compensated if and to the extent renewable generation is delivered to the NYCA that exceeds the historical baseline of renewable energy that the supplier and its affiliates have historically delivered to the NYCA. This would create a situation in which energy is only eligible if it exceeds the baseline of renewable energy that has historically been delivered into New York State. CPA argues that the supplier baseline assumption thresholds be set high so that Tier 4 becomes a net benefit to the State's climate objectives instead of merely an opportunity for suppliers to net additional benefits in higher priced regions.

EDFR

EDFR recommends that NYSERDA continue to consider economic development as a procurement criterion for Tier 4 projects as it did for Tier 1 and Offshore Wind procurement.

IPPNY

IPPNY argues that the two proposed additionality requirements are insufficient to accomplish the stated objective. IPPNY argues that the Commission should not allow new impoundment hydropower under construction to be eligible for Tier 4 because it is contrary to the Commission's long-standing findings that new impoundment hydropower cannot qualify for incentives under the RPS and the CES. Further IPPNY notes that four years ago, the Commission denied Hydro Quebec's (HQ) request to reconsider this policy in the CES. IPPNY asserts that Staff have not provided any justification or sufficient evidence why the Commission's long-standing policy should be changed. IPPNY states there has been no demonstration that the adverse environmental impacts caused by impoundment hydropower addressed in the RPS case are no longer relevant or have in any way been ameliorated. IPPNY recommends that the Commission should make clear that historic recipients that are assessed must include not just other recipients in the New York Control Area (NYCA), but also system load and other recipients in export markets. IPPNY states its concerned that a long-term contract already entered into by Hydro-Québec to sell 9.45 TWh per year of firm power to the ISO New England market may not be properly accounted in determining whether new deliveries to New York pursuant for the proposed Tier 4 will truly be incremental.

Joint Utilities

The Joint Utilities state that it is unclear how Tier 1 obligations and the ACP will be adjusted if a substantial amount of the energy generated to meet Tier 4 obligations results from resources not necessarily eligible under Tier 1, such as Canadian hydropower, and request clarification and consideration of how to limit costs to customers via the overall CES program are needed.

Multiple Intervenors

Multiple Intervenors opines that it has no objections to efforts to increase New York City's reliance on renewable generation or the proposed Tier 4 in concept. However, it disagrees that all incremental costs associated with Tier 4 should be allocated on a load-ratio basis statewide. Rather, it argues that the costs should be borne in whole - or very large part - by customers located in the New York City region because they are the customers who will obtain benefits such as reduced local emissions from the Tier 4 program. Multiple Intervenors goes on to assert that a cap on the Tier 4 REC price at a benchmark based on prevailing Tier 1 REC prices, as proposed in the White Paper, would be appropriate for upstate customers and would mitigate the potential inequitable subsidization by upstate customers of downstate renewable resources generated in the Tier 4 program. Accordingly, Multiple Intervenors states that an upstate customer should pay no more for a downstate renewable facility than it otherwise would have paid for an identical renewable facility developed in upstate New York regions, both of which contribute equally to the 70 by 30 goal. Multiple Intervenors explains that if additional subsidies are needed beyond the price of a Tier 1 REC to support the construction and operation of downstate renewable facilities

and/or the delivery of renewable energy to New York City, those incremental costs should be borne solely by downstate customers.

Regarding transmission costs related to delivering upstate generation to downstate, Multiple Intervenors recommends that the Public Policy Transmission Need process created by the Commission is an appropriate mechanism to allocate these costs. It assigns 75 percent of the transmission project's costs to the economic beneficiaries and the remaining 25 percent is socialized by all customers on a load ratio basis to reflect the existence of certain statewide benefits associated with the transmission project.

The Named Utilities

The Named Utilities acknowledge that the White Paper recommends establishing a Tier 4 solicitation process to address concerns related to both the level of penetration of clean energy resources currently within New York City and the extent to which OSW energy can be delivered to Zone J. The Named Utilities support addressing the imbalance in renewable energy development between upstate and downstate and replacing in-city generation with renewable resources to both meet the State's goals as well as provide associated reduction in emissions and corresponding public health benefits in a densely populated area of the State. However, to develop a program to achieve these results, the Named Utilities agree with many other commenters that additional detail and review is needed. Specifically, the Named Utilities point out that the incentive for renewable generators to site their projects is already transparently available within the NYISO's energy, capacity, and ancillary services market pricing for a particular zonal location and that the locational aspect of the proposed Tier 4 may impact this wholesale market signal. It states that further analysis is

needed on its relationship to established transmission planning processes that consider the needs of the entire State, including reliability, congestion, and public policy, among other needs. The Named Utilities also seek to confirm that behind-the-meter resources can participate in the Tier 4 program because, while the White Paper clearly states that suppliers locating a utility-scale resource within Zone J would be eligible to participate, it does not directly address the treatment of new behind-the-meter clean resources injecting energy within Zone J. Regarding the potential for OSW resources to participate in Tier 4, the White Paper notes the great potential of the OSW to deliver benefits to New York City.

NY-BEST

NY-BEST states that the proposed CES Tier 4 will require extensive generation to be built throughout the state to deliver energy to New York City but may not resolve reliability issues. It goes on to recommend that a Technical Conference(s) be held as part of the CES White Paper process to evaluate incorporation of energy storage into the State's clean energy programs and should include consideration of a standalone Tier 5 Storage REC designed within the CES proceeding, an expanded Tier 4 REC concept that incorporates energy storage and addresses the issues described above, and a new capacity construct within the Resource Adequacy or Transmission/Distribution Proceedings currently being conducted by the Commission.

NHA

NHA asserts use of a three-year energy baseline will not accurately reflect the anticipated hydropower output because hydropower water levels vary greatly from year to year and can include significant multi-year trends. It posits that a three-

year baseline will not capture the variabilities and could either under or overestimate hydropower's output. NHA recommends that the average annual production over a 30-year period would more accurately reflect the output of hydropower in the state.

NYISO

The NYISO states that the White Paper explains that suppliers may demonstrate that their resource is deliverable into Zone J through documentation derived from the appropriate NYISO process. A determination by NYISO that the resource qualifies as a capacity resource for Zone J would satisfy this requirement but a resource would not be required to participate in the Zone J capacity market to generate Tier 4 RECs.

NYMPA

NYMPA asserts that to the extent a new Tier 4 obligation is created, it should be imposed on load in southeastern NY and Zone J and no LSE should be required to acquire more environmental attributes than its load. NYMPA explains that its members are already meeting and exceeding both the 2030 and 2040 goals of the CLCPA. It further explains that a public policy transmission process already exists that can be used to deliver RECs from upstate and elsewhere to Zone J and that process already includes a cost allocation procedure, and for these reasons it is both inequitable and premature to establish a Statewide Tier 4 obligation.

NYOWA

NYOWA does not object in principle to the proposed Tier 4, but does not support it as currently structured and states that New York State should prioritize the use of in-state

resources and labor or at least allow it to compete on a level playing field with imported renewable generation. It urges the Commission to broaden the Tier 4 eligibility requirements so that Tier 2 and possibility even Tier 1 resources could also compete for and be eligible for Tier 4 RECs, as outlined in comments submitted by Environmental Entities. Broadening the universe of eligible resources would help ensure actual competition within Tier 4 and result in the selection of most efficient and cost-effective projects. In addition, NYOWA objects to the proposal in the White Paper that NYSERDA have authority to enter Tier 4 contracts with a tenor up to 30 years. NYOWA points out that Tier 1 contracts are now limited to a 20-year tenor and OSW contracts are limited to a 25-year tenor. In its reply comments, NYOWA states it joins Environmental Entities and Clean Energy Advocates in recommending that the Commission hold a technical conference on Tier 4 and issue a supplement to the White Paper that more fully discusses and explains the rationale for its various assumptions and provisions and fully explores issues raised by stakeholders. Once the supplement is issued, stakeholders should have the opportunity to review and offer comments on it before it is finalized.

NYPA

NYPA refers to a previous recommendation it put forth and argues that the viability of many projects would be bolstered with flexible compensation frameworks optimized to account for the economics and logistical challenges of project development in Zone J. NYPA states that behind-the-meter projects also should be eligible for Tier 4 RECs if they forego Value Stack compensation and otherwise satisfy the Tier 4 eligibility criteria. It recognizes the issues involved with such a construct including challenges arising when customers on

volumetric rates are eligible and the need to make adjustments to avoid double counting RECs. These challenges, however, should be surmountable and NYPA recommends that the Commission direct DPS to convene a stakeholder process with NYSERDA, NYPA, and other interested parties to develop a framework that could accommodate new compensation options for certain DER in a manner consistent with the policies and goals underlying Value Stack and the Tier 4 program, if implemented.

NYPA confirms that the proposed Tier 4 procurement is incremental to the asset's historical baseline production and that it is critical that the baseline is set using a historical period that reasonably reflects average production. As proposed, the supplier energy baseline requirement would be determined using the average of the three most recently reported years prior to the establishment of Tier 4. The proposed reference period for determining baseline production should not be used for hydroelectric facilities because it could significantly over- or under-state actual baseline production and lead to anomalous results.

NYPA states that for Niagara and St. Lawrence, the most accurate average would consider all years for which data is available - 94 years for Niagara (1926 - 2020), and 85 years for St. Lawrence (1935 - 2020). NYPA states that it would assume a voluntary Tier 4 target that is proportional to its overall share of statewide load as stated by Staff. NYPA explains that it will seek to satisfy its voluntary Tier 4 target by self-supplying RECs from its hydroelectric facilities, to the extent that generation from the facilities exceeds the historical baseline and meets other eligibility criteria and that it would work with its customers to contribute to the Tier 4 target. However, NYPA points out that it does not have the same

flexibility as other LSEs to impose Tier 4 costs on its customers.

NY Renews

NY Renews has several concerns about Tier 4 and whether the proposed design is best positioned to meet this goal. NY Renews argues that Tier 4 has not been sufficiently analyzed to determine whether it will prioritize emissions and co-pollutant reductions in disadvantaged communities while not inflicting disproportionate burdens, as required by the CLCPA. These studies should take place now. While the White Paper makes general claims about the health benefits that Tier 4 will bring to environmental justice communities through displacing dirty generation, NY Renews opines those claims are not substantiated with data or study. NY Renews is troubled by concerns that indigenous communities in both Canada and the United States have raised about the environmental impacts of both existing and expanded hydroelectric impoundments. It is unclear, however, that linking Tier 4 REC compensation to a vintage NYCA baseline would promote additionality anywhere but for New York State.

To meet New York's overall emissions reduction goals, Tier 4 must support, and not frustrate, the development and delivery of in-State and in-city wind and DERs. Tier 4 must also provide true additional emissions reductions, not only reductions in the State. Further, the Tier 4 design must substantiate how it will fulfill its obligations to disadvantaged communities as mandated by the CLCPA. This includes prioritizing job creation, emissions and co-pollutant reductions and economic benefits, which Tier 4 does not currently contemplate. NY Renews supports further study of Tier

4, including a Tier 4 technical conference to address these concerns.

Nucor

Nucor states that downstate needs are clearly different. It will require a combination of OSW, transmission upgrades, and imaginative local solutions, such as distributed resources, storage, and load management to achieve the CLCPA goals. Policymakers should keep these very distinct needs and challenges in mind as they move forward. If a Tier 4 structure is adopted, Nucor agrees that the proposed additionality, deliverability, and price cap features are required and that the Tier 4 auction should be confined to 3,000 MW as proposed.

Sierra Club et al.

Sierra Club et al. outline significant concerns about the present design of the Tier 4 procurement and charges that it rushes the state into an ill-advised, unproductive, and long-term dependence on Canadian hydropower. Sierra Club et al. strongly object to the presumption that this resource is necessary for achieving state energy goals. Sierra Club et al. contend that Canadian hydropower will inhibit economic benefits associated with in-state renewable energy at a time when in-state job creation is vital. Sierra Club et al. allege that the proposed Tier 4 structures will place Canadian hydropower in direct competition with existing local and in-state Tier 1 resources, thereby diverting resources from the latter and nullifying local labor and economic benefits.

Sierra Club et al. allege that the environmental, climate, and environmental justice implications of this Canadian hydropower procurement have not been adequately analyzed. Sierra Club et al. note their concern with the environmental

effects of new impoundments and the carbon costs of hydropower. Sierra Club et al. also contend that Canadian First Nations concerns about environmental justice and tribal sovereignty have been ignored. Sierra Club et al. charge that proposed additionality and climate safeguards are inadequate should the Commission move forward with procuring Tier 4 Canadian hydropower. They recommend limiting eligibility to generation from existing, operational impoundments, using a 2017 baseline for evaluating additionality and climate benefits, and excluding Tier 4 RECs resold to non-jurisdictional LSEs to ensure direct compliance obligations and RES integrity. Sierra Club et al. argue that Canadian hydropower is limited in its ability to achieve CLCPA requirements, noting seasonal limits on the provision of zero-carbon electricity in winter. In view of these concerns, Sierra Club et al. call for delay and further analysis of any proposed Tier 4 procurement of Canadian hydropower and notes that the City makes this recommendation as well.

Transmission Developers

Transmission Developers oppose the capping of Tier 4 procurement costs in relation to Tier 1 costs. They argue that this would reduce the pool of potential projects that could supply Tier 4 RECs. Transmission Developers argue that the State can avoid setting a price cap by using existing market data and cost-benefit analysis to ensure that Tier 4 REC procurements provide net ratepayer benefits. Transmission Developers argues that, should the Commission set a price cap on Tier 4 RECs, the Tier 1 REC price constitutes an inappropriate benchmark. Zone J delivery requirements, they allege, are not reflected in Tier 1 REC prices.

B. Tier 4 Procurements

Environmental Entities

Environmental Entities support the proposed Tier 4 as delivery of renewable energy into Zone J is a policy objective. However, Environmental Entities suggest that Staff continue to assess different options for the most cost-effective means of achieving this policy objective while also achieving other policy goals and co-benefits and clearly orient the proposal to better facilitate the delivery of upstate hydro, wind, and solar power into Zone J. Environmental Entities argue that Tier 4 should be competitively procured to align with other CES tiers and the contract tenor for Tier 1, OSW, and Tier 4 should be the same. Environmental Entities support both Tier 1 and Tier 2 resources being eligible for Tier 4 if they are delivered into Zone J, but without the two additional requirements.

The Tier 4 proposal should clarify that the transmission owner could be delivering renewable energy that is a mix of some Tier 1 and some Tier 2, for example, new wind or solar power firming with hydropower from existing facilities. Environmental Entities argue it would be appropriate to apply a price cap on out-of-state resources and Tier 2 resources set at a multi-year rolling average of the Tier 1 REC price. However, for Tier 1 resources, in contrast, it would be appropriate to allow a price adder that represents the cost and value of delivering that new clean energy to Zone J. Environmental Entities recommend the Commission consider establishing a cap within Tier 4 that would apply to out-of-State resources because of the effect on in-state renewable development.

Environmental Entities suggest that the Commission could re-envision Tier 4 as a Renewable Transmission Credit that is paid to a transmission line for carrying renewable energy

into Zone J. Environmental Entities support the Commission holding a technical conference focused on this topic, as suggested by some commenters, but also recommend Staff issue a second White Paper focused exclusively on Tier 4 that addresses recommended changes, and to solicit public comments on this addendum, without delaying the current White Paper's progress.

Aligned Developers

Aligned Developers encourage the Commission to adopt a Tier 4 program. Aligned Developers note that it is difficult to site renewable generation in New York City and as a result the City continues to rely on fossil fueled generation. Further, Aligned Developers believe that increasing transmission into the downstate region is crucial to achieving the CLCPA goals. Because it is unclear how much OSW energy will be available before 2030 and given the intermittence of OSW generation, Aligned Developers believe that a diverse mix of clean energy resources serving New York City will be critical to maintaining system reliability. Aligned Developers note that New York City is encouraging a broad transition to electrification in the buildings and transportation sectors which will increase energy demand. Further, Aligned Developers argues that renewable generation will produce substantial health benefits for in-city environmental justice communities and disadvantaged communities. Therefore, Aligned Developers strongly support the White Paper's proposal for a Tier 4 program, and urge the Commission to adopt it.

The Aligned Developers agree with various party recommendations that procurements under the Tier 4 program should be incremental to renewables procured through Tier 1. The Aligned Developers strongly agree with the various parties' resources participating in the Tier 4 program should not be

subject to a REC price cap equal to prevailing Tier 1 prices for several reasons. Rather, Aligned Developers suggest that the Tier 4 program pricing should reflect the cost of delivering in-state renewables into Zone J while recognizing the value of in-state generation to local New York economies. Aligned Developers believe that the Tier 1 benchmark likely represents the average cost to develop, construct, and operate a renewable project in the upstate region, and does not includes costs to develop renewable generation downstate.

Aligned Developers note that the Commission did not use the Tier 1 price in pricing ORECs and NYSERDA did not propose a \$/MWh price cap for the Competitive Tier 2 program. Aligned Developers argue that where generators bear the costs of transmission, any cap on the Tier 4 REC price, if warranted, should be established in a manner that allows the developer to recover the equivalent Tier 1 REC price plus the transmission cost borne by the Tier 4 REC provider. Aligned Developers believe that the Commission should establish a pricing mechanism that recognizes the value of economic development which accrues to local communities from projects constructed and operating in New York.

Aligned Developers recommend the Commission finalize a Tier 4 pricing mechanism with an "adder" or adjustment, determined by the prior solicitation award's Tier 1 REC Price that would be applied to incremental in-state renewables paired with transmission for delivery into Zone J. They suggest that Tier 2 would have a smaller "adder." Regarding the evaluation of the cost effectiveness of merchant transmission projects for Tier 4 purposes, Aligned Developers propose that NYSERDA utilize a methodology like the Levelized Net REC Cost (LNRC) formula currently employed in its latest Tier 1 Index REC and OREC solicitations.

Aligned Developers support further consideration of the Renewable Transmission Credit (RTC) construct advanced by various parties in their respective preliminary comments and the methodology for NYSERDA to determine the appropriate RTC for a new merchant transmission line should follow the same general LNRC framework described above. Aligned Developers strongly support the position advanced by the Real Estate Board of New York and the City that Tier 4-eligible renewable generation should be delivered to Zone J through transmission lines that are controllable and designated as an in-city capacity resource by the NYISO, which will align the Tier 4 program with New York City's Local Law 97.

All for Energy

All for Energy opposes the establishment of a Tier 4 program. All for Energy supports Tier 4's goal of increasing transmission but believes the Commission must prioritize in-state resources and maximize benefits. All for Energy argues that Tier 4 would directly compete with and cannibalize the market for in-state renewables, outsourcing the economic benefits of the clean energy economy. Further, All for Energy argues that the environmental benefits of expanding Canadian hydropower has been analyzed, such as a potential increase in impoundments. Additionally, All for Energy points out that in the case of New York City's Local Law 97, Tier 4 would remove incentives for the City's building owners to invest in job-creating energy efficiency retrofits to the most energy-consumptive buildings.

ASOW

ASOW argues that a transparent and competitive solicitation process should be used to meet Tier 4 requirements

efficiently and cost effectively. ASOW argues that the Commission should focus on structuring Tier 4 to support options to supply New York City with forms of renewable energy, including OSW generation, that maximize those opportunities. ASOW suggests that OSW wind projects should be permitted to bid into any future Tier 4 procurement processes on this incremental basis. ASOW states that OSW installations have a larger footprint so the wind source to power these turbines is generally available at varying levels throughout the day night. Therefore, unlike its land-based counterpart, OSW generation does not cause the same type or degree of concern with potential impacts of prolonged "lack of fuel" incidences on effective system operations.

Avangrid

Avangrid argues that implementing Tier 4 may involve quantities that could destroy many years of projected Tier 1 procurement needs and raises concerns of lack of competition from a limited supply pool. Therefore, Avangrid recommends not implementing the discussed Tier 4 product without a significant, public, and transparent stakeholder process amongst a diverse set of parties. Avangrid asserts that there are many complications that need to be worked through regarding Tier 4.

Boralex

Boralex supports the establishment of a Tier 4 to help meet the goals of the CLCPA. Further, Boralex argues that Tier 4 can help to facilitate potential health benefits to disadvantaged communities. Boralex states that the State will be able to achieve its goal of increasing the penetration of incremental renewable energy consumed in the downstate region of the State by employing the Tier 4 approach outlined in the White

Paper. Boralex recommends procuring Tier 4 resources in a manner that generally follows the 2020 NYSERDA RES RFP Tier 1 procurement format, at prices that are set through competitive procurement, standard offer, or directly negotiated rates. Boralex supports a 30 years contract tenor. Boralex suggests building in storage to handle the excess renewable production.

Regarding Buyer Side Mitigation, Boralex supports including provisions from the NYSERDA 2020 RES Standard Form Agreement into the Tier 4 contract, not only to allow proposers to provide for the most competitive LNRC possible, but also to ensure that the projects that are awarded Tier 4 contracts are financeable. Boralex argues that the Tier 1 Incremental Economic Benefit evaluation points should be included in a Tier 4 REC score. Boralex states that awarding a Tier 4 REC contract to a single solar or wind farm likely will not provide sufficient volumes to make a Zone J transmission project economically viable. However, Boralex adds that a group of utility-scale projects with Tier 4 REC contracts that plan to use the same transmission line could very well provide sufficient bankable volumes.

Boralex suggests that NYSERDA should either (a) relax the rule that prevents a proposer from making one bid contingent on another by allowing a proposer to make one of its bids contingent on another bid from the same proposer or (b) allow for a proposal with multiple sites comprising one Bid Facility, with Indexed REC contracts entered into in respect of each Bid Facility selected by NYSERDA, with all such contracts on substantially the same terms and conditions. Boralex does not believe that there should be significant concern that Tier 4 will significantly reduce the amount of Tier 1 resources procured by NYSERDA upstate. To mitigate that concern, Boralex proposes that the Commission set a target amount of Tier 4

volumes that are not also Tier 1 resources that are to be procured by NYSERDA under Tier 4.

Boralex agrees with NYSERDA that Tier 4 resources should not only be evaluated against other Tier 4 resources but should also be benchmarked against other resources procured by NYSERDA. For projects with merchant transmission, Boralex suggests that NYSERDA provide for a confidential reserve LNRC, above which it would not award contracts, and that considers (a) the electrical system and environmental benefits of delivering renewable energy into Zone J and (b) the price that NYSERDA has previously paid for similar products under other programs. If the reserve price approach is not adopted, Boralex suggests an alternative price calculation.

Borrego

Borrego remains seriously concerned with the proposed Tier 4 design and its associated 3,000 MW target. Borrego urges NYSERDA to more formally quantify the genesis of this target and the potential benefits that will be achieved, such as cost savings and reliability benefits. Also, Borrego requests that NYSERDA translates its Tier 4 target into energy units, rather than capacity units, so its contribution to New York's energy goals can be better understood. Borrego flags the potential negative impact that these procurements could have on Tier 1 if the quantity of Tier 4 RECs procured is subtracted from the Tier 1 targets.

To ameliorate these impacts, Borrego suggests that Tier 4 quantities be further defined through rigorous analysis and be additional to Tier 1 procurement targets, as they are more than likely to be needed to meet 2040 goals. Borrego is concerned that the Tier 4 program may result in the procurement of overly large quantities of out-of-state hydropower and little

in-state renewable generation. Borrego encourages NYSEDA to solicit additional feedback and input from in-state solar and wind developers, as well as merchant transmission developers, on program design and incentive structures.

Brookfield

Brookfield recommends allowing existing in-state renewable resources an opportunity to deliver into Zone J and qualify for Tier 4 as that would lead to less cannibalizing of upstate renewable resources and would create a competitive market revenue opportunity for resources that otherwise would need to rely on a Tier 2.

CEA

CEA states eligibility requirements must be robust to ensure that the Tier 4 program provides actual environmental and economic benefits and the supplier energy baseline should be at least as high as NYCA deliveries in the most recently reported year, not the proposed three-year average. CEA states that a three-year average could understate the future deliveries that would occur in the absence of a new Tier 4. CEA suggests that the Tier 4 eligibility requirements should also exclude deliveries enabled by any actions that result in flooding additional areas. Further, CEA states that the supplier GHG baseline requirement should be verified through a robust accounting mechanism to preserve the climate integrity of the program.

CEA suggests that eligibility requirements should be sharpened to require that new or expanded impoundments cannot be used to satisfy either additionality baseline, to prevent the potential for backfilling. CEA states that the Tier 4 program should be carefully designed to avoid casting undue uncertainty

on Tier 1 solicitations in the coming years. CEA recommends that Tier 4 evaluation criteria should incorporate job creation and supply chain opportunities to encourage proposals that would deliver Tier 1, Tier 2, and OSW generation directly into Zone J. CEA recommends the Commission hold a technical conference on Tier 4 and issue a supplement to the White Paper that more fully discusses the issues raised by stakeholders in these comments.

CET

CET supports NYSERDA's proposed "open RFP" for the purchase and sale of Tier 4 RECs. CET recommends that the current evaluation criteria for Tier 1 RECs should be used for Tier 4 RECs that do not require incremental transmission.

The City

The City supports the establishment of a Tier 4 program, though the City argues that more analysis is needed. The City argues that increasing renewable generation into New York City through Tier 4 also will help improve air quality and ameliorate health impacts associated with the burning of fossil fuels by the in-City power plant fleet, such as respiratory ailments and hospitalizations, especially among residents of disadvantaged communities. The City suggests that NYSERDA file a supplement to the CLCPA White Paper with more details on Tier 4. The City agrees with other commenters that, to the extent an RTC or other mechanism developed in conjunction with Tier 4 could help spur transmission development into the downstate area and result in new Zone J capacity resources, such concepts are worth exploring as part of NYSERDA and Staff's continued development and refinement of Tier 4.

The City submits that Tier 4 REC purchases by building owners should reduce the amount that their LSE must procure from

NYSERDA for CES compliance purposes on a one-for-one basis, up to the LSE's CES compliance requirement corresponding to that building owner's load. The City supports the White Paper's proposal that any incremental renewables procured through Tier 4 should commensurately reduce the number of renewables needed through Tier 1. To the extent that the Tier 4 program can procure renewable New York City capacity resources toward that same CLCPA target, it is reasonable to reduce, by an equal amount, the GWh of renewables needed through Tier 1.

The City adds that if the Commission determines that existing in-state renewables qualify for Tier 4, then it must also take care not to double- or triple-count the carbon reduction benefits associated with those facilities. The City opposes the recommendation by the other parties that the Commission prioritize in-state renewable generation delivered into NYISO Zone J for Tier 4, at the expense of out-of-state resources. The City argues that the Commission's primary focus of Tier 4 should be to facilitate all such renewable resources in or into the downstate region, regardless of origin. The City advocates for focusing on the operating characteristics of renewable resources, dispatchability, their additionality, their contribution toward a reliable and resilient system, and an expedited transition away from fossil fuels. The City argues that the Commission should conduct a robust analysis of the benefits and costs of Tier 4 and the results should be quickly provided as a supplement to the White Paper. If any cap is included therein, the City states the details and rationale should be provided.

CJNY

CJNY supports efforts to increase the delivery of renewable electricity to New York City. CJNY states that Tier 4

contracts to meet Zone J energy demands should include comprehensive labor standards for construction, operations, and maintenance employment, provide a net addition of renewable energy into the state, and result in GHG reductions.

CCE

CCE supports the White Paper's recommendation of the creation of a separate Tier 4 for Zone J. CCE supports the recommendation for allowing a broader set of hydropower resources to be considered for transmission to New York City, under the conditions that they do not include the building of a new hydropower impoundment and that they result in increased net benefits for NYS. CCE argues that if there are existing out-of-state or Canadian hydropower facilities producing excess energy that can supplement OSW, solar, and energy storage, and not supplant or curtail those in-state renewable energy sources, this should be an option that New York State explores for Zone J.

The Companies

The Companies agree that additional detail and review is needed on Tier 4 and support such measures as noted in the Joint Utilities comments. The Companies emphasize their support for the White Paper's proposal that all LSEs statewide, including non-jurisdictional entities such as NYPA and LIPA, share in the obligation to purchase Tier 4 RECs in proportion to their overall share of statewide load. The Companies disagree with Multiple Intervenors that the costs of Tier 4 should not be socialized. The Companies note that Multiple Intervenors fails to recognize that the CLCPA goals are statewide. The Companies state that Multiple Intervenors' comments do not acknowledge that to achieve the State's carbon reduction goals, additional

renewable energy generation is needed to displace New York City fossil-fired generation. The Companies cite NYSEERDA's 2020 Triennial Review that states "Upstate zones have provided the vast majority of RPS and RES REC contracts to date," with their costs socialized statewide as a result of statewide LSE procurement obligations for RECs. Further, the Companies argue that the zero-emission credit produced by update nuclear facilities is socialized statewide. The Companies agree that the State will need to carefully balance priorities and deploy customer dollars as cost-effectively as possible, but caution against an approach like Multiple Intervenors' proposal that sacrifices the bigger picture and potentially achievement of CLCPA targets.

CPA

CPA states that while NYSEERDA has proposed a 3,000 MW cap for Tier 4, they agree with comments filed by the City of New York that a more substantial analysis should be conducted to better understand the demand for and nature of Tier 4 RECs before any cap is imposed. CPA asserts that the Commission should explore issues including: the difference in costs and benefits between development upstate, downstate, and offshore; the cost of electrically-connecting renewable resources to the City, including the transmission elements that may be needed for Tier 4 projects; and the demand that may or may not exist for Tier 4 RECs by New York City Local Law 97 compliance entities.

EDFR

EDFR suggests that the contract term for Tier 4 projects be 25 years.

HQUS

HQUS supports the establishment of Tier 4. HQUS strongly urges that additional consideration be given to the proposed Tier 4 design elements related to energy and GHG baseline requirements for existing hydropower resources to avoid unintended consequences that could frustrate New York's ability to meet its goals. HQUS lists several reasons that the Tier 4 program should be implemented: New York City's heavy reliance on fossil fuels; none of NYSERDA's awarded Tier 1 contracts for large scale renewable resources are in Zone J; building renewable generation in and around Zone J is challenging; and Tier 4 may be the only near-term option of scale to replace existing fossil fuel-fired generation in New York City. HQUS states that it has sufficient hydropower available today, without expanding or adding reservoirs, to support a Tier 4 solution because of an extensive buildout of new hydropower capacity and implementation of significant energy efficiency and demand side management by HQ. HQUS adds that it is prepared to make a significant new investment to interconnect that the nearly approved transmission line project to HQ's system at a substation located in southern Quebec.

Further, HQUS states that it can replace 1,000 MW of fossil fuel-based generation with clean energy in New York City all year long for 30 years and beyond. HQUS argues that it can serve both as a constant and permanently available baseload resource as well as a flexible resource that can provide electricity in response to changing market conditions. HQUS claims that Hydro-Québec hydropower offered as firm baseload supply and physically delivered to Zone J over newly constructed HVDC transmission will have multiple benefits for New York City and the State such as environmental justice and economic stimulus.

HQUS argues that there are there are legitimate concerns that the proposed baselines are not an effective tool to ensuring displacement of fossil-fuel-fired generation. HQUS asserts that the proposed Tier 4 baselines would require that Hydro-Québec fill existing interties regardless of market needs and price signals and in doing so and would restrict Hydro-Québec from using this valuable operational flexibility to reduce negative pricing events that curtail renewable energy in the State. HQUS adds that large deliveries of Hydro-Québec energy into Upstate New York would increase the occurrence of negative pricing events and curtailments of upstate renewables by forcing Hydro-Québec to sell energy during hours where Hydro-Québec imports into Upstate New York will displace clean generation in New York.

Further, HQUS argues that the requirements will force Hydro-Québec to make uneconomic sales in the NYISO markets simply to maintain a baseline, which in turn will increase the cost of providing Tier 4 RECs in New York City, since the increased costs to Hydro-Québec will need to be included in Tier 4 pricing. HQUS states that the proposed baseline requirements would also reduce, and even jeopardize, HQ's ability to provide the substantial benefits of acting like a battery to more efficiently integrate higher penetrations of renewable generation in New York and across the Northeast. HQUS argues that forcing Hydro-Québec to maintain historical deliveries upstate at levels comparable to the recent past would prevent transitioning from unidirectional to bidirectional flows. HQUS attached a study from London Economics (LEI) to analyze the economic impact of a scenario where Hydro-Québec meets these baseline requirements, compared to a scenario where the market conditions would dictate when Hydro-Québec sells to and buys from the New York market, through the existing interconnections

while delivering energy to Zone J over a new transmission line based on a long-term contract.

HQUS states that LEI concluded in its study that "using the upstate interface to balance intermittent load will be more beneficial than only using Québec hydropower as a baseload source of generation." HQUS suggests that the initial baseline volume calculation should be made over a time that is more representative of average Hydro-Québec supply conditions. Further, HQUS states that the initial baseline volume should be adjusted on a going-forward basis to account for certain changes in export markets (from the initial baseline time) that are outside of HQ's control and compliance with the baseline should be designed to allow Tier 4 suppliers flexibility that can provide value for New York. Additionally, HQUS suggests the length of the commitment to an energy baseline under Tier 4 should not limit HQ's ability to support higher levels of intermittent clean energy in New York by functioning like a battery.

As a second option, HQUS suggests that the Commission consider a "Must Offer" obligation imposed on Tier 4 suppliers that would give New York access to the same amount of hydropower imports it received in recent years but would preserve the ability of markets to economically and efficiently dispatch generation while preventing the curtailment of significant volumes of renewable energy generation. While still imposing baseline requirements on Tier 4 suppliers, HQUS states that a Must Offer approach would be aligned with competitive markets and be much simpler to implement and administer and would avoid significant displacement of domestic clean generation in New York. HQUS recommends that any such Must Offer requirement should expire in 2030 for the same reasons expressed above regarding Energy Baseline Alternative Proposal #1. HQUS

proposes that discretion should be provided to NYSERDA to develop supplier-specific detailed energy baseline methods that consider the array of factors identified in HQUS's comments in a way that balances the goals of CLCPA, regional carbon reduction and costs to New York.

HQUS states that the GHG baseline proposed in the White Paper is not appropriate because it cannot consider a range of changing market conditions and factors outside the supplier's control and will result in a range of unintended consequences. Because the GHG baseline requires an increase in a hydropower supplier's total renewable energy production, HQUS states that it also requires an increase in a hydropower supplier's sales, as electricity must be consumed the instant it is produced. HQUS suggests that the assumption that a reduction of its sales to external markets, such as New England, Ontario or New Brunswick, will result in an increase in fossil fuel-based generation is flawed because these markets have significant clean energy mandates that prevent increased use of carbon emitting generation. Further, HQUS argues that the GHG baseline is based on another false premise because emission reductions are based on where and when clean energy is supplied. HQUS states that requirements that Hydro-Québec produce and sell a minimum quantity of energy each year to meet the GHG baseline may result in increased emissions throughout the region by restricting HQ's operational flexibility. Also, HQUS notes that the GHG baseline will result in unintended consequences because demand reduction measures in Quebec are not appropriately accounted for.

HQUS proposes two alternative GHG baseline proposal. Proposal One states that GHG baseline adjustments like energy baseline adjustments and adjustments for demand side management in Quebec. Proposal Two proposes to use the Tier 4 supplier's

historic portfolio ratio of clean and renewable energy as the "supplier GHG ratio cap" to limit its non-renewable percentage. Further, Tier 4 suppliers will be required to guarantee that the annual electricity supply mix in their portfolio (including from system generation, purchases and imports) will continue to be comprised of a minimum percentage of renewable energy (technologies defined as renewable in CLCPA) each year for the term matching any Tier 4 contract. HQUS proposes that latitude should be provided to NYSERDA to develop a detailed GHG baseline method that considers the array of factors identified in HQUS's comments in a way that balances the goals of CLCPA, regional carbon reduction and costs to New York.

HQUS recommends that any competitive solicitation for Tier 4 resources should utilize an evaluation method that appropriately considers and weighs both the benefits and costs of proposals. HQUS suggests that any competitive evaluation explicitly consider several criteria such as, but not limited to, increased reliability and resiliency; ability to provide capacity; and fuel diversity benefits. HQUS recommends that Tier 4 procurement costs should not be capped in relation to Tier 1 costs because Tier 4 resources embody unique characteristics, costs and risks and NYSERDA should be provided sufficient flexibility in Tier 4 procurements to ensure that New York's programs are achieved.

Additionally, HQUS proposes that the structure of Tier 4 REC contracts warrants adjustments related to negative pricing and additional adjustments that may be required. HQUS agrees that flexibility should be allowed for NYSERDA to develop necessary tracking and/or auditing frameworks that NYSERDA or the Commission may deem necessary to monitor compliance with the baseline requirements, as long as they are reasonable and seek to implement an approved Tier 4 criterion that are known at the

time a developer commits to a Tier 4 contract. HQUS fully supports the proposed delivery requirements, which will translate into concrete and measurable renewable energy within New York City. HQUS states that general principles associated with Tier 4 delivery requirements should not too rigidly establish and incorporate into the Tier 4 program all the detailed requirements that have been developed for Tier 1 over the past few years. HQUS urges the Commission to also provide flexibility to NYSEERDA in the detailed implementation of Tier 4 delivery requirements.

IPPNY

IPPNY recommends that adoption of the NYISO carbon pricing would provide a market-based mechanism to most efficiently recognize and compensate for the environmental and local reliability benefits that the White Paper proposes to incent through the new Tier 4. GHG baseline and calculation of incremental renewables should be limited to energy the supplier and its affiliates generate from the power plants that they own. IPPNY suggests that suppliers should not be required to provide commercial information on their purchase and sales agreements. Rather, IPPNY recommends that metrics for renewable energy should only be associated with physical ownership and operation of eligible hydroelectric power plants, and not a purchase or resale of renewable energy from a third party. IPPNY advocates for additional specificity to ensure that energy produced by a supplier's hydropower facilities is truly incremental and deserving of a Tier 4 credit and not a redirection of existing impoundment hydropower enabled by an acquisition or build-out of a new renewable facility. Further, IPPNY states that the additionality requirement must specify total generation from hydropower plants. IPPNY recommends that the Commission should

modify the GHG baseline requirement to impose unit-specific baselines for each of the supplier's existing hydropower facilities. IPPNY adds that the supplier must also demonstrate that the RECs associated with that specific unit's incremental power have not been, and will not be, supplied to any other customer as part of a load obligation or contractual obligation.

IPPNY suggests that the Commission also require that the unit-specific baseline and future calculations be net of system losses because HQ's transmission system incurs significant losses because the plants are located so far away from load centers and the system has significant inefficiencies tied to distance, line sag, ice and other factors. IPPNY recommends that an accurate loss factor should be allocated to each facility to ensure that hydropower plants that incur higher losses are not over-compensated for incremental production at the plant site. IPPNY argues that any Tier 4 credits and debits should be banked and settled between the parties so that New York is not paying a premium in one year for incremental energy that is wiped out the next year due to drought conditions. IPPNY argues that the Commission should calculate the baselines based on total renewable and unit-specific production that occurred during the 2018 calendar year because the Romaine project just came online in 2017, and a three-year average would be underestimated.

IPPNY supports the NYISO approach for verifying delivery into Zone J and the White Paper's proposal to use the New York Generation Attribute Tracking System (NYGATS) to ensure the type and quality of power delivered into Zone J. Further, IPPNY recommends the Commission should require NYSERDA to file a detailed implementation plan for public comment which proposes the specific historical data that NYSERDA will require and the tracking system/auditing regime that NYSERDA will use. IPPNY

argues that Canadian suppliers of Tier 4 RECs be required, as a condition of eligibility, to track the production of all their and their affiliates' generation with the North American Renewables Registry and demonstrate that all of those tracked tags for attributes are compatible with NYGATS. Furthermore, IPPNY states that if a supplier's renewable energy production is to be sourced via contract with a sub-supplier, baselines must also be calculated for the sub-supplier and an offset for both load growth and contractual sales obligation must be included to the purchases.

IPPNY recommends that the Commission reject the White Paper's proposal that NYSERDA be authorized to award Tier 4 REC contracts without conducting a competitive solicitation process. IPPNY argues that all resources capable of providing that service should be eligible to participate in Tier 4 procurements to produce the most efficient and cost-effective result.

Joint Utilities

The Joint Utilities agree with many other commenters that additional detail and review is needed of the proposed Tier 4 program. The Joint Utilities argue that there are five elements of the White Paper's proposed Tier 4 solicitation process merit comment here and additional detail and review: the relationship of the Tier 4 proposal to NYISO market rules on siting decisions; the ability of new clean energy resources within New York City to participate in the Tier 4 solicitation process; the ability of OSW to participate in Tier 4 solicitations; the proposed treatment of RECs when there are negative energy prices; and the relationship between Tier 4 and Tier 1 RECs and ACPs. The Joint Utilities agree with Avangrid that Tier 4 should consider the impact on existing products such as Tier 1 and OSW. The Joint Utilities argues that the

locational aspect of the proposed Tier 4 may impact this wholesale market signal and further analysis is needed on its relationship to established transmission planning processes. The Joint Utilities also seek to confirm that behind-the-meter resources can participate in the Tier 4 program and solicitations.

LIPA

LIPA argues it would be helpful for NYSERDA to provide, when available, a proposed schedule for Tier 4 procurements and how that will affect its Tier 1 procurement trajectory to allow utilities to incorporate any change in Tier 1 procurement requirements into their planning processes. LIPA also argues that the construction of additional transmission facilities to Zone J combined with renewable resources will impact the reliability requirements for New York City. LIPA suggests that the Commission should further clarify and quantify what impacts these changes will have to the determination of Zone J locality requirements and how associated costs/benefits, if any, will be shared equitably amongst all those participating in the proposed Tier 4 program. LIPA recommends that ancillary services provided by participating projects should be considered as statewide benefits to the extent they reduce the need to offset or "firm up" the intermittency of renewables. LIPA requests that NYSERDA to provide clarification on how the cost of Tier 4 related transmission projects, such as the proposed Champlain-Hudson Power Express Line will factor into the proposed Tier 4 REC costs.

LIPA argues that both additionality requirements proposed are reasonable, appropriately restrictive, and should ensure that hydropower resources eligible under Tier 4 are additional to baseline generation and the three-year historical

baseline also appears reasonable. LIPA states that the Commission should consider capping Tier 4 procurement costs at the lower of the developer's costs and a Tier 1 REC cost, possibly the last clearing price from a Tier 1 procurement. LIPA argues that direct negotiations between NYSERDA and a developer could be considered where there was insufficient response to a Tier 4 competitive solicitation to assure a competitive result.

Ravenswood

Ravenswood does not object to the creation of a Tier 4 REC program, provided that such program does no harm to New York State's other renewable energy programs, that it is competitive and transparent, and that it maintains or increases the environmental and economic benefits that the State could reasonably expect to realize without such a program. Ravenswood does not agree with the White Paper's proposals that any amounts procured through Tier 4 would reduce the amount that must be procured through Tier 1, because it dilutes the value of Tier 1 RECs. Ravenswood states that allowing an LSE to count a Tier 4 REC towards its Tier 1 obligation creates an unfair advantage for resources of lower standards. Ravenswood argues that even though the White Paper proposed certain requirements on Tier 4 RECs to increase the quality of the RECs, those requirements are not sufficient to allow Tier 4 RECs to be counted towards the higher standards associated with Tier 1 REC obligations. Furthermore, Ravenswood states that the White Paper does not explain why Tier 1 eligible resources cannot meet the needs of delivery into the downstate area, and thus does not adequately show why there is a public need for an inferior Tier 4 resource standard.

Ravenswood argues that the Tier 4 would permit a very limited number of resources and/or suppliers to participate, which will leave NYSERDA without an objective means to determine if the resulting pricing is reasonable. Ravenswood is concerned that ratepayers will have no way of knowing if Tier 4 is fairly priced. Ravenswood is concerned restrictions for new impoundments in the White Paper do not provide sufficient detail to ensure they will address and prevent electricity from yet-to-be-constructed large-scale hydropower facilities from receiving Tier 4 RECs. Ravenswood suggests that Tier 4 RECs should be conditioned on no new reservoirs being constructed in the Tier 4 facilities' control area during the Tier 4 REC contract tenor. Ravenswood argues that the White Paper, however, does not shed sufficient light on the methodology that would be used to test additionality requirements.

REBNY

REBNY strongly supports the proposal to create a Tier 4 of the CES, arguing that a comprehensive framework to bring power from elsewhere into New York City is needed. REBNY states that, by helping deploy renewables that can replace in-City generation, the Tier 4 mechanism has the potential to make a meaningful contribution to addressing the longstanding issues facing the New Yorkers who live near those generators. It will be vital that the pricing of Tier 4 RECs be flexible enough to respond to the individual costs for each Tier 4 project so that these projects can be brought to market. Given the benefits of Tier 4, REBNY argues it may be appropriate for the Commission to provide NYSERDA with the authority to procure the environmental attributes from more than 3,000 MW of Tier 4 resources.

C. Purchasing of Tier 4 RECs

Environmental Entities

Environmental Entities supports the reselling of Tier 4 to the voluntary market, but states that resold RECs should not count towards the 70 by 30 goal.

Aligned Developers

Aligned Developers support the White Paper's recommendation that NYSERDA have the flexibility to resell Tier 4 RECs to non- LSEs. Aligned Developers state that allowing NYSERDA to resell REC also offers the co-benefit of allowing the State to recoup a portion of CES-related funds from building owners instead of from the LSEs and ratepayers. They argue that resold RECs still represent clean electricity production that benefits the State and thus these RECs should count toward the State's goals. Additionally, Aligned Developers urge the state to establish an accounting mechanism to ensure all RECs resold to voluntary markets and used for compliance in the 70 by 30 goal are retired to offset electricity usage. Aligned Developers also agree with various commenters that the Commission should not allow NYSERDA to resell Tier 4 RECs at a premium.

CEA

CEA argues that NYSERDA should recognize that any resale of Tier 4 RECs to the voluntary market are not eligible to count toward the 70 by 30 target.

The City

The City supports the White Paper's proposal that NYSERDA's sale price to all LSEs of any remaining Tier 4 RECs be

reduced by any revenues received from non-LSE sales. However, the City argues that NYSERDA's resale price for Tier 4 RECs should be no higher than the sum of the costs incurred thereby to purchase, process, and resell such RECs. Further, should NYSERDA charge a premium on resold Tier 4 RECs, the City recommends that the revenues received should only be used to support energy efficiency and distributed energy programs in New York City.

CPA

CPA supports the proposal that NYSERDA be authorized to resell Tier 4 RECs to Local Law 97 compliance entities and argues NYSERDA should not create additional hurdles to Local Law 97 compliance through the installation of a premium on Tier 4 RECs.

CET

CET supports NYSERDA's proposed authority to re-sell Tier 4 RECs and/or engage in joint purchasing with other entities seeking renewable delivery into New York City. CET argues that having NYSERDA act as the clearinghouse for Tier 4 RECs will also reduce counterparty risk associated with the shorter-term contracts expected with real estate owners or lessors and other parties, allowing for superior pricing.

LIPA

LIPA advocates that excess Tier 4 RECs should be made available for resale and priced based on an assessment of market receptivity with a floor price no lower than the cost to NYSERDA for procuring the RECs. LIPA recommends that associated excess revenues be used to reduce future LSE Tier 4 REC costs.

REBNY

REBNY supports allowing NYSERDA to resell Tier 2, Tier 4, and OSW RECs to voluntary purchasers, including building owners, as proposed in the White Paper. REBNY states that establishing such a mechanism will solve a significant shortcoming of existing policy and help leverage private resources to more efficiently accomplish State policy objectives. REBNY argues that allowing voluntary buyers to play a larger role in the market will advance State policy objectives by encouraging greater investment in renewable generation and transmission while protecting ratepayers.

D. Tier 4 LSE ObligationCPA

CPA agrees with the White Paper's recommendation that the cost of Tier 4 be borne by the LSEs throughout the State, as the benefits will similarly be spread across the State.

Nucor

Nucor states that local grid solutions, such as local clean supply, storage, dynamic load management, should always be the first choice, should be strongly encouraged, and should not be underestimated because they ultimately will be key to meeting the CLCPA goals. Consequently, Nucor argues, the incremental, non-transmission costs of Tier 4 should not be socialized statewide, since this will undercut the necessary incentives to develop practicable local urban area solutions. Those costs should be allocated to the urban zones where the delivered renewable energy looks to displace fossil generation. In the alternative, if those costs are not fully allocated to Zone J, the costs should be allocated using the same "beneficiaries pay"

formula established by the Commission in Case 14-E-0454 for Public Policy Requirements transmission projects, which have, as a core objective, delivering more renewable energy to downstate zones.

VII. Repowering

A. Eligibility

Environmental Entities

Environmental Entities recommend the approval of the Repowering Proposal, but with additional flexibility for facilities to achieve the criteria through a major reinvestment. Environmental Entities recommend rather than require that all three repowering criteria be met to achieve eligibility for Tier 1, meeting one criteria be deemed sufficient. Additionally, Environmental Entities recommend separate criteria be developed for hydropower facilities.

Boralex

Boralex states that the Commission should adopt the Repowering Proposal, as modified as recommended by Environmental Entities. Boralex argues that the requirement that "the generator, the entire turbine and structures supporting the turbine be replaced is challenging for a hydro-facility as routine maintenance and major repairs can be performed such that a turbine replacement is not necessary. Moreover, Boralex claims that it is more sensible for hydro-projects to perform a major refurbishment of existing components than to replace them.

Brookfield

Brookfield supports the Environmental Entities' recommendation with respect to the Repowering Proposal and recommends that FERC relicensing be an additional qualifier.

The City

The City recommends that the conditions regarding repowering should be modified to remove disincentives to repower hydroelectric facilities when their turbines and generators reach the end of useful life.

LIPA

LIPA argues that the White Paper's proposal provides reasonable conditions for assuring that existing facilities see appropriate price signals for repowering. However, LIPA argues that the conditions should be broadened to include a need for the additional Tier 1 RECs that would be produced so not to encourage unnecessary expenditure of ratepayer funds; essentially, this would apply a "but for" test to the proposed repowering, meaning that "but for" the repowering, ratepayers would incur costs above those of the repowering.

NHA

NHA points out that when considering significant investments in re-licensure, a hydropower owner must account for the total facility costs, not just those investments related to power generation. While the prime mover can be a large capital expense for a hydropower facility, FERC licensure can place an even greater investment burden on the owner. Required investments can include protection, mitigation, and enhancement requirements, such as fish passage and operational constraints in support of water quality, that can total in the tens of millions of dollars. Given that the prime mover is only one

component of a set of investments a hydropower owner must consider, NHA argues that any FERC re-licensure should qualify as a Tier 1 resource eligible for the repowering provision.

NHA further requests that Staff re-examine the current state of science regarding methane emissions from new hydropower storage impoundments, because hydropower lifecycle emissions are lower or comparable to other renewable resources according to the United Nations IPCC, recent reservoir emissions studies lack meaningful data from reservoirs in the United States, and potential emissions from hydropower reservoirs vary widely and should be considered on a case by case basis.

B. Useful Life

Avangrid

Avangrid states that its main concern is that the useful life criterion, proposed in the White Paper to be twenty years, be set at a tenor that closely coordinates with the Tier 2 procurement schedule. Avangrid argues that NYSERDA should set the Tier 2 procurements and repowering useful life criterion to maximize the likelihood of existing units being able to achieve repowering so they can continue to contribute to the CLCPA mandates in the long run.

LIPA

LIPA supports the definition of useful life. LIPA argues that the required replacement of each prime mover for Tier 1 eligibility may be too restrictive in certain situations. LIPA adds that further details are necessary to assess the 80 percent tax basis for Tier 1 eligible repowering. LIPA argues that the Commission could also consider basing its criteria for repowering eligibility in the Tier 1 program on a minimum level

of production increase achieved by the replacement of some of the prime movers at the facility.

VIII. Non-Jurisdictional LSEs

CEA

CEA reemphasizes the importance of commitments from non-jurisdictional LSEs such as NYPA and LIPA to achieve statewide goals for the electric sector, as well as for GHG emissions reduction more broadly.

LIPA

LIPA requests clarification how an LSE's remaining obligations will be affected if the LSE exceeds its load ratio share of the 6 GW distributed solar goal. LIPA argues that a specific allocation of the 6 GW distributed solar goal to LSEs has not yet been prescribed by the Commission. LIPA asserts that LIPA's pro-rata share of the 6 GW goal is approximately 750 MWs which LIPA argues is on pace to exceed that target before 2025. As a result, LIPA argues that the renewable energy produced by distributed solar projects enrolled in LIPA programs, and subsidized by LIPA's other ratepayers, will likely exceed its pro-rata share of the total contribution from distributed solar estimated in the White Paper. LIPA recommends that DPS and NYSERDA, in consultation with stakeholders, develop a methodology by which the renewable energy produced by distributed solar capacity more than any LSE's pro rata share of the 6 GW goal can be estimated and credited toward the LSE's remaining renewable energy standard requirements, such as Tier 1 and Tier 4.

IX. NYPA ZEC deficitAll for Energy

All for Energy believes that DPS Staff's current proposal to repurpose renewable energy and energy efficiency funds to pay for Zero Emission Credits (ZECs) to subsidize the State's dirty and outdated nuclear fleet is unacceptable and sets a dangerous precedent. Further, All for Energy argues that by using renewable energy and energy efficiency funds we are limiting our ability to further reduce climate pollution, create new clean energy jobs, and ultimately replace our outdated nuclear fleet.

CEA

CEA states that NYSERDA should not cure NYPA's ZEC deficit by raiding Clean Energy Funds.

Joint Utilities

The Joint Utilities agree that the shortfall should be addressed, but argue that non-NYPA customers should not be expected to make up NYPA's ZEC shortfall and to support a public authority. The Joint Utilities argue that NYPA should meet its ZEC obligations with monies provided by its own customers.

X. ReportingCJNY

CJNY recommends the Commission adopt a process to track and report on detailed employment, job quality, economic development and investment information, including any benefits for disadvantaged communities, building on current reporting by NYSERDA with detailed employment information.

XI. TransmissionASOW

ASOW urges the Commission to revise the CES Program parameters by directing the expeditious completion of ongoing transmission studies and defining the mechanisms available to most efficiently and cost effectively develop offshore and onshore transmission and distribution infrastructure to support the OSW generation build-out. ASOW states that there is currently limited transmission infrastructure to accommodate OSW generation and the potential for curtailments has already been cataloged.

Aligned Developers

Aligned Developers states that the case for additional transmission is well-established. The NYISO has identified transmission as a priority issue in its annual Power Trends report each year since 2017. Aligned Developers cite the 2019 Congestion Assessment and Resource Integration Studies (CARIS) Report which revealed that the additional renewable generation necessary to meet the CLCPA goals would result in pockets around the State where renewable generation would not be fully deliverable due to transmission constraints (referred to as "renewable generation pockets"). Further, Aligned Developers note that in the 2020 Reliability Needs Assessment, the NYISO identified reliability deficiencies and needs starting in 2023, mostly in New York City. Other NYISO studies also argue that there would be potentially significant curtailments of renewable resources without elimination or reduction of existing transmission system constraints. Aligned Developers argue that accelerated development of merchant transmission resulting from

a Tier 4 program also will spur additional clean energy generation development under the Tier 1 program.

Avangrid

Avangrid expresses concern that as development of land-based renewables continues, the transmission gap will grow and the congestion in the system that prevent clean energy from flowing through the state will intensify. Avangrid recommends short term transmission solutions to avoid curtailment of renewable generation and to increase access to renewables in areas of low resource availability. Avangrid argues that the future transmission grid should provide more flexibility needed to ensure the future resource mix meets the energy needs of the whole state.

Avangrid encourages the State to pursue a more planned strategy to OSW transmission and recommend that the State consider an offshore transmission system that would optimize the number of points of interconnections ("POIs") for Zone J in the future procurements. Avangrid suggests a new model be developed that utilizes early planning and siting of transmission grid improvements for OSW may create efficiency, reduce offshore developer risk, and benefit all participants including the State and electric customers and reduce the risk of developers. Avangrid recommends a coordinated transmission solution with New Jersey. Lastly, Avangrid suggests a larger, more comprehensive analysis of the future grid, with special care on evaluating numerous potential future generation scenarios.

CET

CET argues that NYSERDA should be evaluating and incentivizing carefully designed transmission projects that bring maximum long-term benefit to customers in the form of

incremental clean energy production and enhanced reliability relative to cost, not simply selecting the least expensive projects without consideration of their characteristics. For New York City, CET asserts that different transmission projects will have different impacts on the in-City capacity requirement, and therefore on the City's ability to allow the retirement of older fossil units while maintaining reliability. CET adds that gaining the additional benefit of full deliverability of capacity from renewable resources into the City may require alleviating existing bottlenecks and therefore additional financial support.

CET argues that these factors have real impacts on the cost, pollution and local environmental benefits experienced by New York City residents, and therefore should be considered in NYSERDA's evaluation of proposed Tier 4 projects that bundle generation and transmission. CET suggests offering a "Transmission REC" to the projects that best meets the State's broader clean energy goals. Bidders could have the option to bid just transmission, just generation, or transmission and generation bundled together. CET recommends that NYSERDA and DPS Staff should work with stakeholders including transmission developers, utilities, and customer advocates, to develop a transparent process for the evaluation of transmission projects eligible for Tier 4 RECs.

CJNY

CJNY fully supports the State's efforts to upgrade the grid and expand transmission capacity to serve New York City and achieve the 70 by 30 Target. CJNY supports the State's ongoing transmission study of both the onshore local and bulk distribution systems as well as an offshore network or coordinated transmission system.

SOS

SOS is concerned that the addition of 1,000-1,250 MW of hydropower to the downstate zone will further diminish the benefits of upstate-downstate transmission congestion relief and may make new transmission capacity uneconomic resulting in fewer new transmission proposals. Further, SOS argues that because of the bottle neck of the upstate grid, upstate generators must be curtailed to accommodate renewable electricity when generated. SOS states that according to the NYISO, new renewable projects will curtail older renewable projects resulting in little or no emissions reductions. SOS argues that these problems will not be resolved without planning for new transmission capacity to unbottle the system. SOS states that overbuilding renewable generation to ensure system reliability will result in increased curtailment orders from the NYISO, and insulates renewables from market signals, delinking generation from emissions reduction outcomes that are efficient and effective.

XII. General CommentsEnvironmental Entities

Environmental Entities state that energy storage within Zone J can reduce energy costs and provide both economic and environmental benefits, especially to communities that are subject to fossil emissions throughout the year, and especially on high demand days. Environmental Entities urge the Commission to consider the storage market when designing Tier 4; to continue to explore other options for facilitating storage deployment; and to support efforts to modify the interconnection rules and market participation rules at the NYISO to support the market for projects that are stand-alone storage or renewables

plus storage. Environmental Entities reiterate the importance of planning and investing in improvements to the local and bulk transmission system to modernize the grid, increase efficiency, decrease congestion, and prevent renewables curtailment.

CJNY

CJNY urges the Commission to adopt a set of progressive procurement policies including comprehensive labor standards covering construction, operations, and maintenance jobs in all projects under the CLCPA. CJNY suggests that project labor agreements and workforce community agreements should be implemented for all construction jobs. Additionally, CJNY recommends prevailing wage agreements for all construction and building service jobs. CJNY suggests labor peace agreements for operations, maintenance, and manufacturing jobs and apprenticeship and labor-management training partnership utilization requirements.

CEA

CEA opines that one of the primary drivers of the upstate/downstate dichotomy explained by Staff in the White Paper is the challenge to build transmission projects in the state. It argues that the State's recent push to expand OSW and to remove regulatory barriers to large-scale renewables is laudable and CEA supports the goals behind the initiative. It explains that this buildout will take a significant amount of time to finance, permit and construct, assuming there is no local opposition like has been evident increasingly seen across the state in recent years. According to an analysis by CEA, New York families, seniors, small businesses and manufacturers need natural gas and have saved nearly \$31 billion over the past decade because of increased availability and natural gas

pipeline infrastructure. CEA continues by stating that as natural gas use has grown and expanded across New York, carbon emissions and total air emissions from criteria pollutants reported by the Environmental Protection Agency have fallen dramatically.

CEA opines that building out large-scale transmission projects in New York from rural areas to population centers has been notoriously difficult and is clearly a public policy need to meet the objectives of future renewable development, and that additional analysis and work should be done to evaluate the differences between downstate and upstate project development, as well as land and labor costs near New York City or offshore project development. Lastly, CEA points out that the Department of the Interior has identified 35 critical minerals and rare earth elements that have been deemed vital to our national and economic security. The United States is 100 percent dependent on foreign sources for 17 of these minerals, and many others that are essential to renewable energy components, manufacturing, battery storage, and project development.

For example, the cobalt supply chain which is essential for EV batteries is almost entirely controlled by China with material sourced in the Democratic Republic of the Congo with child labor and harmful mining practices. Related to the use of minerals, CEA states that the blades on a single wind turbine are made up of more plastic than 5 million smartphones according to the Manhattan Institute. It therefore encourages the State to fully consider not only where renewable energy projects will be cited, but to chart a plan for where decommissioned renewable components will be recycled or stored long-term if the component cannot be recycled.

Joint Utilities

The Joint Utilities express concern about the use of ACP funds. The Joint Utilities note that due to REC shortfalls, ACPs have become significantly costlier to customers. The Joint Utilities argue that the likelihood that ACPs will continue to feature prominently in compliance obligations, so the Commission should take a measured approach to the calculation of ACPs and take steps to ensure that the monies collected are used to benefit customers. The Joint Utilities support the use of ACP funds collected to pay down the future cost of RECs, otherwise other uses of ACP funds will raise future REC prices without increasing their corresponding societal value.

The Joint Utilities advocate that the Commission should allow the State's electric utilities, if they choose to do so, the opportunity to develop large-scale renewable generation to help meet the CLCPA goals. The Joint Utilities believe that recent changes such as authorizing index RECs and allowing NYPA to finance renewable generation points makes it timely to reconsider utility interest in renewable generation ownership. The Joint Utilities request that the Commission authorize utilities to work with third-party renewable generation developers, under a "build-transfer" model, to develop and finance renewable energy projects which would be owned by utilities upon commercial operation date, but where project development and construction risks would be carried by third-party developers, and developers would be compensated for bearing these risks. Further, the Joint Utilities believe that this approach may also help limit REC shortfalls while doing so at the least cost to customers.

KCE

KCE argues that neither the storage target nor deployment incentives have been updated to reflect the increased

renewable energy goals in the CLCPA. KCE states that without an update to deployment incentives, the current NYSERDA bulk storage incentive will be depleted imminently. KCE asserts that energy storage, regardless of whether it is administratively paired with a renewable resource, can provide concrete grid benefits permitting the integration of the intermittent generation resources and reducing curtailment. KCE supports the NY-BEST recommendation that Staff hold a Technical Conference to consider how best to incorporate storage into the CES and/or other policies at play such as a dedicated standalone "Tier 5 Energy Storage REC."

Micro-Utilities

The Micro-Utilities assert that while reaching a low carbon future is important, New York State needs to establish the least-cost energy plan because avoidable high prices for electricity place an undue burden on lower income citizens that is inconsistent with the Community Protection and Environmental Justice contents of the CLCPA. The Micro-Utilities suggest how it would be beneficial to conduct scoping studies to reduce the number of scenarios that the Climate Action Council would need to explore. They refer to practical limits that must be considered including cost, land use, material usage, the ability of the industrial base to design, manufacture, and maintain various segments of the overall energy system; and the status of particular technologies. As a useful example, Micro Utilities point to a recent National Renewable Energy Lab study which calculated the available rooftop areas in New York State and calculated that it could produce 55.3 tera-watt-hours, which in turn would require 340 million square meters of solar panels.

Multiple Intervenors

Multiple Intervenors state that their primary concern in establishing and implementing policies related to the State's clean energy mandates is that the Commission ensure that customers and especially price-sensitive, energy-intensive consumers are not burdened with excessive and/or unnecessary costs. Multiple Intervenors emphasize that the costs associated with Commission policies must be considered in the context of the benefits accruing from them and that customers should pay their fair share of costs commensurate with the benefits that they receive. It goes on to state that the costs to customers of various Commission policies and initiatives need to be evaluated not only on a case-by-case basis, but also in the aggregate because customers cannot afford to fund every program that arguably can be justified in isolation. Multiple Intervenors add that such cost-related concerns are present and relevant at all times, but are of extraordinary importance now, as customers grapple with COVID-19 and its effects.

NBB

NBB states that biodiesel can be a significant contributor to the accomplishment of climate protection goals established by CLCPA. It explains that the heating oil industry in New York is proactively working toward further reducing the carbon intensity of its products and that in addition to funding heat pump installations, DPS should support other heating system technologies that can utilize renewable fuels. NBB posits that a significant percentage of existing gas-fired combined cycle generating units could operate with liquid fuels including biodiesel and that conversion of these plants to biodiesel would provide economic benefits to the NYISO Forward Capacity Markets auction process by offsetting the financial burden of

constructing new renewable generation capacity. NBB goes on to explain the difficulty that electric heat pumps encounter in meeting thermal loads in winter and that use of biodiesel in these applications could help forestall the anticipated winter peaking that will occur with reliance upon heat pumps. NBB concludes by stating its support for New York's programs which can ensure a sustainable future and that biodiesel can assist in supporting sustainable energy production, improve local air quality and realize economic benefits from new job creation.

NHA

The NHA points out that the grid of the future will rely on intermittent resources and therefore a reduced number of controllable generators able to balance the variability from wind and solar. It argues that there is a policy disconnect between the resources the State wants, (wind, solar and other "just-in-time" renewable resources), and the flexibility that the wholesale grid operator needs.

NY-BEST

NY-BEST states that to achieve the aggressive CLCPA goals, energy storage must be recognized and incorporated in State policies, programs and regulations as an essential technology for enabling a high penetration of renewable energy and the phase-out of fossil fuel generation, while maintaining reliability. It points out that energy storage will be necessary to supplement the intermittency of new wind and solar resources, reduce curtailment, relieve grid congestion, and permit renewable energy to be delivered to locations like New York City, but also to specifically displace many fossil-fueled peaking resources in New York City and Long Island. NY-BEST adds that while existing programs have been instrumental in

jumpstarting energy storage deployment in New York, the current programs supporting energy storage deployment are insufficient to meet the 3 GW storage target of the CLCPA, and adds that it will not drive coordinated deployment of a storage asset base that specifically supports high renewable penetrations and leads to the retirement and replacement of the existing fossil-fuel peaking generation fleet.

NYECA

NYECA states its concern about the additional gas generation necessary due to the closing of partial generation from Indian Point and specifically mentions that additional generation coming from new gas-burning power plants Cricket Valley Energy Center (CVE) and CPV Valley (CPV), which it argues were built specifically to replace Indian Point and which are now surrounded by environmental justice communities as well including Dover and Wawayanda, NY. It argues that when Indian Point's Reactor 3 shuts down next year, New York City will transition from less than 60 percent reliance on fossil fuels to almost 90 percent reliance in 2021. It points out that generation from CVE and CPV as well as increasing capacity demand on metro area power plants has increased volatile organic compounds, small particulates from gas combustion - particulate matter 2.5, ozone, and other pollution in environmental justice communities.

NYECA also refers to California's power supply issues during peak demand and how that serves as a warning for advocates for a swift shift to renewables and complete decarbonization of the power grid. It explains that such efforts require careful planning to ensure reliability and stability, preferably before utilities, grid operators, and governors realize that even in a heatwave, the sun cannot help

with evening peak demand. NYECA also adds that battery technology coupled with renewables provides little advantage beyond peak-shaving, a very short-term energy dispatch during a peak-use period. It goes further to add that the 2500 MW Ravenswood storage project recently proposed will be the largest lithium-ion battery on the planet, but when complete it will only store about an hour of energy that Indian Point's two reactors generated on a constant basis. NYECA opines that storing a single day's worth of electricity produced by Indian point with this technology would cost over \$7 Billion. NYECA concludes by declaring that between 2025 and 2040, New York must generate about 25 times more renewable electricity than all the wind and solar deployed across the state today and that these additional renewable sources will have to be deployed at a sustained rate that is almost four times faster than the renewable generation scheduled for installation between 2019 and 2025. It explains that this corresponds to about 28 times more wind and solar installed within New York by 2040 compared to today, and 34 times more wind and solar in 2050, to meet demand forecasted by NYISO and goals of the CLCPA.

NYISO

The NYISO asserts that by leveraging competitive procurements for RECs and the competitive wholesale electricity markets, in conjunction with the NYISO's planning processes, the State can pursue its policies in an economically efficient manner while the NYISO maintains the high degree of electric system reliability New Yorkers expect. The NYISO states that it continues to urge adoption of its carbon pricing proposal to maintain efficient market outcomes and provide New York State with a powerful tool to achieve CLCPA requirements. NYISO explains that carbon pricing in NYISO's wholesale markets has

the strong advantage of signaling where new resources should locate for the highest value to the system and its consumers. Further, the NYISO posits that internalizing a state-determined social cost of carbon dioxide emissions in the NYISO's energy market would send a meaningful financial incentive to developers that identifies efficient ways to address carbon-reduction requirements for downstate loads. Regarding REC management, the NYISO states that REC contracts should continue to be competitively awarded to applicants within all the REC Tiers discussed in the White Paper. While the NYISO continues to believe competitive wholesale electricity markets are necessary for New York State to achieve its environmental goals in a timely manner, the NYISO recognizes that competitively awarded REC contracts play a significant role in facilitating the resource development required in the CLCPA.

Subsequent to the White Paper, NYISO explains that it engaged in analysis of possible resource mixes toward a zero-carbon grid through 2040 in "New York's Evolution to a Zero Emission Power System: Modeling Operations and Investment through 2040 Including Alternative Scenarios." Additionally, the NYISO's ongoing Climate Change Phase 2 study examines the impact of changes associated with the CLCPA on system operations. Importantly, the NYISO highlights these studies here to allow the Commission, DPS Staff, NYSERDA, and other interested stakeholders to draw on all of them for additional reference and a common knowledge base. The NYISO explains that while the NYSERDA/DPS Staff White Paper and the NYISO studies rely on varying assumptions. They point to some similar, generally-accepted conclusions such as intermittent renewable resources will at times find themselves curtailed due to the limitations of the existing transmission system and the grid will require fast-responding, flexible supply resources to supplement

renewable resources when the sun does not shine and/or the wind is not blowing. Further, the NYISO states that energy storage resources can provide valuable balancing services and will fulfill some of the supply needs, but that due to charging, duration and other operational limitations, currently available storage technologies cannot provide a complete solution. The NYISO also offers up that additional CARIS can be requested for NYISO to evaluate specific projects or changes to the grid. (The CARIS July 2020 Report is attached to the NYISO's comments.) It comments that NYSERDA's procurement process should favor projects that reduce congestion, avoid curtailment, and allow for the most renewable energy production.

NYMPA

NYMPA states support for the adjustments proposed for the 2021 and 2022 obligation years but adds that they are not sufficient, and that LSE obligations should be adjusted to levels reflecting the actual availability of RECs. Otherwise, it asserts that funds collected from customers create no new renewable development and contributes nothing to the goals set in the CES or the CLCPA. It adds that by themselves, these adjustments are especially hard to support during a time of unprecedented economic hardships caused by the COVID-19 pandemic, and doubly so for NYMPA members, whose entire energy requirements are already supplied by carbon free resources. Furthermore, NYMPA states that a 90 percent shortfall of Tier 1 RECs was indicated for 2020, 60 percent for 2021, and 35 percent for 2022 and that according to the Triennial Review, 15 percent of LSE obligations were met through ACPs in 2017, 51 percent in 2018 and 50 percent in 2019. It concludes that there are simply not enough RECs available to meet the established targets, that LSE obligations should be adjusted to reflect that reality, and

the continued collection of ACPs for compliance contributes nothing to the state's goals and has no relationship to current or future REC procurements.

NYPA

NYPA states concern that the interactive effects of various and increasing renewables will drive curtailments of renewable energy systems, not only for Tier 1 resources, but for the entire CES. Increasing the proportion of renewable energy in the State's supply portfolio as needed to achieve the CLCPA Targets will have a significant impact on market dynamics and can lead to the curtailment of renewable or zero-emission resources. NYPA explains that more specifically, the renewable resources that receive the greatest value for their environmental attributes will be able to submit the lowest bids, often negative, and will be selected to run. Conversely, renewable resources that are not compensated for their environmental attributes, such as NYPA-owned hydroelectric generators under the current regulatory regime and NYISO energy market structure, will have to submit comparatively higher energy bids into the NYISO market and will find it increasingly difficult to bid at a competitive level. Interactive effects such as economic curtailments will make it more difficult and costly to achieve the CLCPA Targets. NYPA points to the situation in 2019 in which Zone D realized real-time LBMPs of \$0/MWh or less during approximately 470 hours. NYPA concludes that the Commission immediately should commence a stakeholder process to analyze the curtailment problem and develop solutions that can be implemented in the retail market and/or through regulatory action.

Additionally, the NYISO recently concluded that approximately 10 million MWhs of renewable generation will be

curtailed in 2030 including units with REC contracts. Siemens performed an analysis for NYPA and projected modest economic curtailment of NYPA hydroelectric assets in the 2025 base cases that increases through 2030. With these potential negative impacts in mind, NYPA respectfully urges the Commission to direct DPS Staff and NYSERDA immediately to begin working with NYPA to develop a framework for future implementation that would compensate NYPA's hydroelectric units for their environmental attributes and contributions to grid reliability in a high-renewable-penetration system and submit it to the Commission rather than waiting until the issue becomes acute and demands immediate attention.

NY Renews

NY Renews states that good jobs must be the foundation of this new clean economy, and they must include good jobs and equitable development in disadvantaged communities. NY Renews states that the White Paper should ensure that the Renewable Energy Portfolio requires progressive procurement policies for all projects, including comprehensive labor standards covering construction, operations, maintenance and manufacturing employment.

Serium Energy

Serium Energy Storage argues for increased focus on storage capacity, arguing that the development of adequate amounts of in-state storage facilities can improve the performance of renewable generation and help New York reduce the need to rely on imports from its neighbors to meet its own operational needs. Serium Energy Storage recommends initiation of a proceeding would examine the operational and reliability needs of the grid alongside the economic requirements and

potential funding mechanisms to achieve the realization of the required resources, recognizing that such facilities require a different approach to financing than conventional battery storage projects.

NEDPA

NEDPA states that as New York State's CLCPA is implemented it needs to encourage those renewable energy sources that will support both the near-term electric production goals of 70 percent renewable by 2030 as well as the long-term GHG reductions, even if they are a small proportion of the total renewable portfolio. This includes manure-based anaerobic digestion.

Intermittent resources like wind and solar need to be complemented with net zero-emission resources including bioenergy in the form of biogas from dairy anaerobic digestors. New York State dairy farms with anaerobic digestors can help fill this void. Supports the creation of a separate Tier V within the CES 2.0 framework for resources that do not meet the definition of "renewable" under the CLCPA but that are zero-carbon or low-carbon reliable resources that should be supported for purposes of ensuring the system's ability to reach the State's CLCPA goals.