Case 15-E-0302

Clean Energy Standard

Phase 2 Implementation Plan Proposal

Filed by

Staff of the New York State Energy Research and Development Authority

and

Staff of the New York State Department of Public Service

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Contents

1. Introduction

On August 1, 2016, the Public Service Commission (Commission) issued its Order Adopting a Clean Energy Standard.[1] The Clean Energy Standard (CES) is consistent with the State Energy Plan goal that 50% of the electricity consumed by New Yorkers is to be generated by renewable energy sources by 2030 as part of a strategy to reduce statewide greenhouse gas emissions by 40% by 2030. The CES includes a Renewable Energy Standard (RES) and a Zero-Emissions Credit (ZEC) requirement. The RES consists of an obligation on every load serving entity (LSE) to serve their retail customers by procuring new renewable resources, evidenced by the procurement of qualifying Tier 1 Renewable Energy Credits (RECs) or by making Alternative Compliance Payments (ACPs). The RES also includes a Tier 2 maintenance program to provide support to those “at risk” eligible facilities that have demonstrated that they are not economically viable without additional support. The ZEC requirement consists of an obligation that LSEs purchase ZECs from the New York State Energy Research and Development Authority (NYSERDA) in amounts proportionate to their load served. As part of the CES, the Commission also ordered NYSERDA to conduct periodic solicitations offering long term contracts for the purchase of RECs to support financing of new RES Tier 1-eligible facilities.

The CES August Order acknowledged that additional implementation measures would be necessary to fully implement the CES, to be addressed through a series of Commission actions in successive orders. Those additional measures were to be determined in an implementation phase that will address several issues identified in Appendix F of the CES August Order along with other implementation issues that may arise.

As part of the implementation phase, on October 31, 2016, Department of Public Service Staff (Staff) and NYSERDA submitted a Clean Energy Standard Phase 1 Implementation Plan Proposal to continue implementation of the requirements of the CES August Order for its launch in 2017. The Phase 1 Proposal included details and processes regarding RES eligibility, certification, long term procurement of RECs, LSE demonstration of compliance and other reporting requirements. The Commission approved the Phase 1 Implementation Plan Proposal by order dated February 22, 2017[2] with certain revisions as described in the body of the Order, and directed the filing of a Final Phase 1 Implementation Plan within 30 days. The Final Phase 1 Implementation Plan, incorporating the changes required by the February 22 Order, was filed by Staff and NYSERDA on March 24, 2017.

This Clean Energy Phase 2 Implementation Plan Proposal (Phase 2 Proposal) continues the process of executing a plan in furtherance of the goals and requirements of Commission orders regarding the CES. The Phase 2 Proposal:

1. Documents Staff’s review of the annual targets for LSE obligations for 2018 through 2021, with recommendations to modify the targets adopted in the CES August Order.
2. Clarifies the treatment of voluntary purchases and baseline resources in observing progress toward the CES goals.

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[1] Case 15-E-0302, Proceeding to Implement a Large-Scale Renewable Program and a Clean Energy Standard, Order Adopting a Clean Energy Standard (issued August 1, 2016) (CES August Order).
[2] Case 15-E-0302, supra, Order Approving Phase 1 Implementation Plan (issued February 22, 2017).

3. Establishes protocols for the application of an annual divergence test which, if the test results fall outside of prescribed ranges, may trigger an interim review by the Commission.
4. Establishes program design and procedures for the sale in 2018 of Tier 1 RECs procured by NYSERDA under long-term contracts, and provides direction for post-2018 design modifications, including:
    a. Sale frequency and timing;
    b. Sale pricing and inventory management process;
    c. Eligible REC purchasers and transferability; and
    d. Sale methods.
5. Establishes a method to calculate the alternative compliance payment (ACP) for 2018 and to utilize any ACPs received by NYSERDA.
6. Proposes additional details regarding NYSERDA's long term procurement design.

2. Tier 1 RES Targets

Among other requirements, the CES August Order directed Staff, as part of the implementation phase, to review and either confirm or propose modifications to the targets adopted for 2018-2021 after taking into consideration current market conditions including the result of the 2016 NYSERDA solicitation.

More recently, in its Value of Distributed Energy Resource Order issued March 9, 2017 (VDER Order), the Commission confirmed that the generation attributes of all renewable resource generation consumed by customers in New York State will contribute towards the Statewide 50% by 2030 RES goal, which relies on both mandatory and voluntary contributions for its ends to be achieved. [3] However, the VDER Order did allow certain behind-the-meter (BTM) projects that are compensated through the VDER value-stack to generate RES Tier 1 eligible RECs that LSEs may use to meet their RES annual target obligation. Therefore, the LSE obligation targets from 2018-2021 described below take into consideration these factors and account for the impact of removing the non-RES Tier 1 BTM generation that was included in the LSE target obligations specified in the CES August Order. In addition, the loads of the Long Island Power Authority (LIPA) and the New York Power Authority (NYPA) were deducted from the statewide load and reflected separately to more clearly define the obligation of the LSEs under the Commission's jurisdiction. For the 2017 compliance period, both LIPA and NYPA have indicated to NYSERDA that they will self-supply the RECs needed to meet their RES target obligations and may continue to do so in the future.

2.1. 2018 – 2021 LSE Compliance Obligation Calculation

To facilitate the review of the targets adopted in the CES August Order for 2018 through 2021, this Phase 2 Proposal adopts the same methodology provided in the CES August Order. The load forecast developed by the New York Independent System Operator (NYISO) [4] was used as the starting period for

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[3] Case 15-E-0751, In the Matter of the Value of Distributed Energy Resources, Order on the Net Energy Metering Transition, Phase One of Value of Distributed Energy Resources, and Related Matters (issued March 9, 2017) (VDER Order) p. 64.

[4] In order to maintain consistency in its forecasts, Staff used the same methodology and data sources used to calculate the CES Targets for the CES August Order. Staff analysis began with the 2015 Load and Capacity Data Report (Goldbook) developed by the NYISO and then made recurring annual adjustments of 2,227 MWh for

this analysis and was then adjusted to reflect the reduction of incremental energy efficiency measures projected to be installed as a result of utility energy efficiency programs and those administered by NYSERDA, which results in an anticipated incremental load reduction of 2,227 MWh annually.[5]

As referenced above, and illustrated in Table 1 below, the portion of the statewide load served by LIPA and NYPA was deducted to develop the portion of the statewide Commission jurisdictional load, for which LSEs are expected to procure RES Tier 1 RECs or make ACPs in fulfillment of their RES compliance obligation.

Table 1: Calculation of Jurisdictional Load (GWh)

Year	Total Statewide Energy Need Excluding EE	Cumulative Additional Energy Efficiency	Forecasted Statewide Load	LIPA Forecasted Load *	NYPA Forecasted Load *	Jurisdictional Forecasted Load
2017	166,762	6,681	160,081	19,763	22,882	117,436
2018	167,839	8,908	158,931	19,621	22,718	116,593
2019	169,632	11,135	158,497	19,567	22,656	116,274
2020	171,520	13,362	185,158	19,525	22,607	116,026
2021	172,160	15,589	156,571	19,329	22,380	114,861

** "LIPA and NYPA Forecasted Load" is based on its share of the statewide load per the CES August Order*

The NYSERDA Anticipated and mandated Minimum procurement targets for years 2017-2021 reflected in the CES August Order for entities under the Commission's jurisdiction (distribution utilities, ESCOs and direct customers) (Jurisdictional Load) remains unchanged.[6]

Table 2: Anticipated Annual Procurement Targets per CES August Order (MWh per year)

Year	Jurisdictional (NYSERDA)	LIPA	NYPA	Total Procurements
2017	1,442,596	242,766	281,087	1,966,449
2018	1,483,352	249,624	289,028	2,022,004
2019	1,524,108	256,483	296,969	2,077,560
2020	1,564,863	263,342	304,911	2,133,116
2021	1,605,619	270,200	312,852	2,188,671

Since a long-term contract for the sale of RECs is a significant part of a successful financing effort, NYSERDA anticipates that few if any of the projects that receive a RES award will be in operation at the

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expected incremental energy efficiency measures installed beyond those contemplated by the NYISO in its forecast. For this forecast, Staff has adjusted the amount of BTM generation that will be eligible to count toward the RES LSE obligation, to comply with the Commission's VDER Order, as well as adjustments to the anticipated output from RES Tier 1 eligible projects procured as part of the Renewable Portfolio Standard (RPS) Main Tier Solicitations conducted through 2016.

[5] CES August Order, p. 81.

[6] CES August Order, p. 114.

time of award. As a proxy for the expected timelines between receipt of a NYSERDA award and a facility's commercial operation, the Tier 1 RECs procured in each annual NYSERDA solicitation are assumed to begin creating RECs, and become available to meet an LSE Tier 1 REC obligation based on a three-year lag (i.e., Tier 1 RECs acquired through the 2017 solicitation will be minted beginning in 2020). The anticipated volume of Tier 1 RECs from NYSERDA acquisitions, coupled with the RECs available from previously-awarded Tier 1-eligible RPS Main Tier-funded projects (Tier 1 Large Scale Renewables in Table 3 below) in addition to RECs acquired from Tier 1 eligible BTM projects, are a portion of the basis for establishing the LSE obligation in a given year.[7] Also, while LIPA and NYPA did not elect to participate in NYSERDA's 2017 solicitation, as indicated in the CES August Order, both are permitted to do so in the future through the provision of a long term contractual agreement with NYSERDA to purchase the associated RECs.

Table 3: Calculation of Statewide Available Renewable Energy (GWh)

STATEWIDE

Year	Forecasted Statewide Load	Baseline Renewables *	Non-Tier 1 BTM	Tier 1 BTM	Tier 1 Large Scale Renewables	Total Renewable Energy	Percent of Load Met by Renewable Energy
2018	158,931	41,296	1,969	107	155	43,527	27.4%
2019	158,497	41,296	2,142	232	1,016	44,685	28.2%
2020	158,158	41,296	2,314	357	3,837	47,804	30.2%
2021	156,571	41,296	2,486	482	5,859	50,123	32.0%

** The "Baseline Renewables" represents the level of renewable resources available in New York during 2014 – the base year used for the CES August Order*

2.2. Voluntary Participation

In its November 2016 Order Providing Clarification,[8] the Commission explained the relationship between the annual LSE obligations to acquire RECs, or make ACPs, and the State's goal that 50% of the electricity consumed in New York by 2030 be from renewable resources. In that Order, the Commission stated that "new renewable resources from NY-Sun and other Customer-Sited Tier projects are to be counted towards the overall goal, however such resources were not to be included in the amount of renewable energy the LSEs are mandated to procure in 2017." [9]

As directed by the Commission in its VDER Order;

> Effective immediately, NYSERDA shall relinquish all rights to any environmental claims, certificates, attributes or other embodiments or memorializations of those claims for energy produced by any system to which it provided financial incentives under the CST and NY-Sun programs. This directive to relinquish rights applies both to Certificates minted in NYGATS and to

[7] Per the August Order, Tier 1-eligible RECs from other certified sources are also eligible for meeting the LSE Tier 1 RES obligation.

[8] 15-E-0302, supra, Order Providing Clarification (issued November 17, 2016)

[9] Ibid., p. 6.

all environmental claims, attributes or other embodiments or memorializations of those claims prior to the commencement of NYGATS tracking.[10]

As a result, while the energy production of non-Tier 1 eligible projects will be tracked and accounted for, that generation is separate and apart from the calculation of the annual LSE obligations for 2018 through 2021. As stated in the VDER Order, the generation from these facilities is available to project owners for use in voluntary commitments in excess of any compliance obligation.

2.3. Baseline Renewable Supply

In its February 2017 Phase 1 Implementation Plan Order, the Commission directed Staff to report on the potential for expanding the Tier 2 eligibility (maintenance support for certain existing renewable facilities) within 180 days of that Order. Since that process is ongoing, the proposed LSE obligation targets for 2018 through 2021 assume that the 2014 baseline renewables remain in place through 2021. As required by the Commission, Staff will annually monitor changes in the output and of the baseline facilities and the location of the retirement of the associated RECs through the New York Generation Attribute Tracking System and adjust future LSE RES obligations, where necessary to maintain progress toward the RES goal, in the triennial review process beginning in 2020.[11]

2.4. LSE Obligation

The following tables illustrate the revised calculation of the RES Tier 1 LSE obligations for 2018 through 2021 in accordance with the Commission's November 2016 Clarification Order and provide a comparison of the obligations included in the CES August Order with these adjustments. While these calculations are shown for the Jurisdictional Load only, it is assumed that LIPA and NYPA will procure RECs in the same "Annual LSE Obligation" percentages, as shown in Tables 4 and 4A below, to meet their obligations for their own loads, as each plan to do for 2017. It is important to emphasize that the changes in the mandated obligations do not affect the procurement targets that were established by the Commission in its CES August Order or the overall RES 50% by 2030 goal. Rather, the revised LSE mandated targets reflect the award to operation lag and an extension of the decisions articulated by the Commission in its November 2016 Clarification Order and the March 2017 VDER order, as described above. These decisions determined that new distributed renewable energy resources, not eligible for Tier 1, would not be included in the mandated LSE targets but would help the state to achieve its overall 50% by 2030 renewable energy goal. This difference in the LSE mandated obligations is more noticeable in the early years of the RES program when non-Tier 1 eligible solar PV projects installed through the NY-Sun program comprise the preponderance of renewable supply.[12]

[10] VDER Order, pp. 70-71.
[11] CES Order, p. 18.
[12] See VDER Order Appendix B. Summary Table of Distributed Energy Resource Categories and Treatment of Generation Attributes.

Table 4: RES Tier 1 LSE Obligation (GWh)

JURISDICTIONAL

Year	Forecasted Load *	Tier 1 BTM	Tier 1 LSR **	Tier 1 BTM and LSR	Annual LSE Obligation
2018	117,436	53	121	173	0.15%
2019	116,593	141	768	909	0.78%
2020	116,274	228	3,075	3,303	2.84%
2021	116,026	316	4,558	4,874	4.20%

** Equals NYISO Forecast minus Addition EE minus LIPA and NYPA Allocated Load*

***For the years 2018 and 2019, the "Tier 1 LSR" available in each year equals the Tier 1 RECs expected to be available from RPS Main Tier Solicitations conducted through 2016. For 2020 and 2021, the "Tier 1 LSR" available in each year equals the expected Tier 1 RECs from RPS Main Tier Solicitations that were operational in 2019, plus Tier 1 RECs that become available in each of 2020 and 2021, plus expected Tier 1 RECs procured for the RES by NYSERDA in 2017 and 2018.*

Table 4A. Comparison of Annual LSE Tier 1 Obligation - CES August 2016 Order to application of the Commission's November 2016 Clarification Order reflected in this Phase 2 Proposal

Year	August 1, 2016 Order	Nov 17, 2016 Clarification Order	Phase 2 Proposal
2017	0.6%	0.035%	- - -
2018	1.1%	- - -	0.15%
2019	2.0%	- - -	0.78%
2020	3.4%	- - -	2.84%
2021	4.8%	- - -	4.20%

2.5. RES Divergence Test

As described in the CES August Order:

> As a safeguard against undersupply or oversupply imbalances, Staff will perform at least annually the divergence test which, if the test results fall outside of prescribed ranges, may trigger an interim review by the Commission. Interim review serves primarily as a safety valve against undersupply, but it should also consider potential oversupply situations. If serious imbalances develop, the Commission will consider taking corrective actions to maintain a reasonable level of price stability. Although interim review is an important safeguard, the triennial targets will be presumed reasonable and interim revisions will be undertaken only in unusual circumstances. Compliance flexibility measures including the ACP should serve to mitigate most short-term divergences.

The CES August Order also required that criteria for the divergence test should be developed in the implementation phase of the CES. The primary purpose of the divergence test is to correct for significant differences between 1) supply of Tier 1 RECs, the quantity of which is in large part driven by central procurements by NYSERDA, and 2) demand for Tier 1 RECs, primarily based on the annual Tier 1 RES obligations of LSEs as refined in this plan. In particular, the divergence test should seek evidence that supply and demand are on diverging paths unlikely to self-correct (i.e., by the market responding to price signals) to trigger actions that (i) assure that ratepayers will not, thought their LSEs, be burdened with paying for material volumes of ACPs for an extended period in the event that administratively-determined targets turn out to be infeasible to meet (shortage case), and (ii) assure that market REC prices are not so suppressed be extended surplus that the renewable energy development pipeline will shut down (over-supply case).

The ultimate quantity of Tier 1 RECs obtained through NYSERDA's procurements is yet to be determined. However, it is certain that the quantity of Tier 1 RECs ultimately purchased from generators by NYSERDA in a given year and ultimately sold to obligated LSEs will not equal the quantity of Tier 1 RECs necessary to satisfy the entire LSE obligation quantity in a given year. Some amount of supply and demand imbalance is an inevitable component of the RES design; undersupply of Tier 1 RECs from NYSERDA is accommodated through the ability of an LSE to source Tier 1 RECs through alternate means or make ACPs. Oversupply of Tier 1 RECs by NYSERDA can be mitigated through the use of the RES banking provisions to supply these RECs in subsequent years.

However, a significant and persistent under- or over-supply condition should be identified and potentially mitigated before the triennial review. Staff and NYSERDA propose an annual process designed to determine the adequacy, or potential adequacy, of renewable energy supplies to meet the RES Tier 1 LSE percentage requirement by assessing the current and anticipated quantity of available RES Tier 1-eligible RECs compared to the LSE obligation targets for the coming years. The proposed process consists of three steps: (i) evaluating whether current conditions have been met to trigger concern; (ii) forward-looking evaluation to assess whether a course-correction is needed, and (iii) establishing the course-correction action.

The proposed identifier of potentially problematic shortage would be triggered if there are two consecutive years of significant ACPs, in excess of 10% of the total MWh Tier 1 RES obligation in the first year and at least 20% of the total MWh Tier 1 RES obligation in the second year. The proposed identifier of problematic over-supply would be triggered if there are two consecutive years of increasing banking by NYSERDA in excess of 10% of the total MWh Tier 1 RES obligation in the first year and at least a 20% of the total MWh Tier 1 RES obligation in the second year.

If either threshold is triggered, Staff and NYSERDA shall undertake an assessment based on available information of whether, for how long and by how much the concern might persists. The assessment shall consider NYGATS certificate availability based on the status if eligible supply already certified, supply contracted for by NYSERDA or others but not yet commercially operational, the status of projects under development in the region, renewable and NYGATS and adjacent control area certificate trends across the region, trends in renewable technology costs, and any such other information brought to the attention of Staff and NYSERDA during the investigation. The assessment will consider information including, but not limited to, whether a divergence is present, or whether supply has already responded to a shortage (but has yet to come online), and if divergence is apparent, is it material or persistent enough to trigger action.

If the cause of the difference is determined to be problematic, persistent and likely to result in a significant financial impact, Staff will make a formal recommendation to the Commission to conduct an interim review of the NYSERDA procurement targets and RES Tier 1 obligations.

3. NYSERDA Tier 1 REC Disposition

3.1. 2017 NYSERDA Tier 1 REC Sales

Per the CES August Order, NYSERDA was tasked with the roles of procuring RECs from Tier 1 RES-eligible resources under long-term contracts as a central procurement agent, and reselling Tier 1 RECs procured through RPS Main Tier central procurements (pre-2017) and Tier 1 RES procurements (2017 and thereafter) for ultimate use by RES-obligated LSEs.

For the 2017 compliance period, in November of 2016 NYSERDA prospectively published on its website a price and the estimated quantity of the Tier 1 RECs that NYSERDA would offer for sale. The offered REC price was established based on the projected weighted average cost per MWh that NYSERDA expected to pay to acquire the 2017 RECs expected to be offered.[13]

LSEs were then offered a limited period of time during which they could elect to purchase their pro-rata share of Tier 1 RECs from NYSERDA in 2017 (based on the historical load share ratio of the LSE) by executing a Commission-approved purchase agreement. LSEs with contractual obligations to purchase Tier 1 RECs from NYSERDA commenced equal monthly payments in January of 2017.

The CES August Order established restrictions on what entities were eligible to purchase RECs from NYSERDA, as well as restrictions on the transferability of NYSERDA-procured Tier 1 RECs during the 2017 compliance period, stating that NYSERDA will offer the RECs for sale in the compliance period only to each participating LSE. Furthermore, RECs purchased from NYSERDA in 2017 by LSEs may not be traded, but may be sold back to NYSERDA at cost if ultimately not needed to demonstrate compliance.

While the approach taken for the 2017 compliance period was appropriate for the initial year of the RES during which relatively few RECs were available for sale by NYSERDA, the CES August Order required that, for subsequent years, Staff should propose a methodology for pricing and offering for sale NYSERDA procured Tier 1 RECs.

3.2. 2018 NYSERDA Tier 1 REC Sales

Staff and NYSERDA recognize that defining a long-term design for REC disposition at this time would be preferred by LSEs and those involved in REC markets; however, it is also important to acknowledge that the RES design will be influenced by market and policy factors which are rapidly evolving in New York State. Most notably, the VDER Order defined eligibility and established restricted REC transferability (tradable, sellable and/or monetizable) rules for distributed energy resources (DER) installed under the now-available Phase One NEM and VDER Phase One Value Stack tariffs. The VDER Order also provided that in future Phase Two VDER proceedings, significantly more transferability of RECs would be necessary.[14]

[13] While the contract prices for 2017 REC purchases was known in November 2016, the actual deliveries were projected, and hence the weighted average price was an estimate.
[14] VDER Order, p. 69.

Until the parameters of REC transferability are established in future Phase Two VDER proceedings, it would be premature for the REC disposition design in this phase of CES implementation to include significant changes from the 2017 design. Instead, incremental changes are proposed herein for 2018, which will provide improvements in NYSERDA Tier 1 REC sale frequency and timing, but will leave other elements from 2017 largely unchanged until full market alignment is appropriate and timely.

a. Sale Frequency and Timing

Rather than prospectively soliciting interest from LSEs to contractually commit to purchase NYSERDA's *anticipated* Tier 1 RECs, NYSERDA proposes to introduce, for the 2018 compliance period, four quarterly Tier 1 REC sale events, during which NYSERDA will offer the *actual* number of Tier 1 RECs in NYSERDA's NYGATS account at the time of the sale. This change is expected to benefit LSEs in several ways. At the time of NYSERDA's quarterly REC sale events, LSEs will have greater awareness of their actual load served[15] during the prior quarter; as a result, LSEs would:

1. no longer need to be held to their potentially obsolete historic load share ratio, and would no longer need to estimate their REC obligation or take on quantity risk in doing so;
2. no longer face load uncertainty as a disincentive to their Tier 1 REC purchases from NYSERDA;
3. be required to commit less of their capital in each Tier 1 REC purchase commitment, and do so less in advance of when they would realize commensurate revenue on the electricity sales; and
4. face reduced exposure to uncertainty regarding actual production, thus leading to less uncertainty as to whether the market is in shortage or surplus.

NYSERDA is also expected to benefit from this change, because reduction of each of these risks may encourage LSEs to purchase NYSERDA's RECs when offered, thereby improving NYSERDA's cash flow and reducing NYSERDA's working capital needs. It will also greatly reduce the magnitude of the annual reconciliation process.

For the 2018 compliance period, NYSERDA proposes to offer Tier 1 RECs procured through pre-2017 RPS Main Tier solicitations and, to the degree available, Tier 1 RES procurements (2017 and thereafter) for sale to LSEs four (4) times per year through quarterly offerings to LSEs. The timing of these offerings is designed to align with the certificate issuance process in NYGATS. By no later than ten (10) calendar days after the last month of each calendar quarter, NYSERDA will announce the quantity of Tier 1 RECs to be offered for sale. The sale process shall conclude within twenty-eight (28) calendar days of the last month of each quarter, as described below:

Trading Period	Tier 1 REC Sale Offer Announcement	Tier 1 REC Sale Process Conclusion
Q1	March 31, 2018 + 10 calendar days	March 31, 2018 + 28 calendar days
Q2	June 30, 2018 + 10 calendar days	June 30, 2018 + 28 calendar days
Q3	September 30, 2018 + 10 calendar days	September 30, 2018 + 28 calendar days
Q4	December 31, 2018 + 10 calendar days	December 31, 2018 + 28 calendar days

[15] While the preliminary load obligation associated with retail sales will be known, these figures may be subject to final reconciliation and reporting by the New York Independent System Operator.

As described in the CES Final Phase 1 Implementation Plan, after the Preliminary RES Compliance Report has been generated, a thirty-day reconciliation period commences during which an LSE can finalize Tier 1 REC transactions for the compliance period to satisfy their compliance obligation. At the end of this reconciliation period, trading for the vintage year closes in NYGATS. This timing and process will allow LSEs to apply banked RECs, purchase RECs from other sources, or make ACPs for any remaining annual compliance obligations after the conclusion of the Tier 1 REC sale process and before the publication date of the Final RES Compliance Report. Alternatively, LSEs may bank surplus RECs at this time towards future year RES compliance.

b. Sale Pricing and Inventory Process

For the 2018 compliance period, by December 1, 2017, NYSERDA will file its vintage 2018 Tier 1 REC sale price offered in a filing with the Commission, and post the vintage 2018 Tier 1 REC sale price on its website. The 2018 Tier 1 REC sale price will be based on the weighted average cost per MWh NYSERDA paid to acquire all of the vintage 2018 Tier 1 RECs projected to be sold in 2018 plus any Commission-approved administrative adder.[16] The sale price will be the same in each quarter, with NYSERDA accepting the risk that the actual weighted average cost of RECs purchased by NYSERDA during calendar year 2018 may differ from its projection.

Any vintage 2018 RECs that remain unsold at the end of a quarterly sale process will be offered again with the number of RECs offered for sale in the subsequent quarter. For example, unsold vintage 2018 RECs minted in the second quarter of 2018 will be offered for sale along with the RECs minted in the third quarter of 2018.

Vintage 2017 Tier 1 RECs that are minted in NYGATS but not purchased from NYSERDA by LSEs in 2017 through the processes resulting from the CES August Order will be offered through quarterly sales processes during 2018 as described above. The price of vintage 2017 Tier 1 RECs will remain based on pricing established by the CES August Order and subsequent filings at $21.16 per Tier 1 REC.[17]

Tier 1 RECs sold to LSEs by NYSERDA will be allocated on a first in, first out (FIFO) basis using the vintage date for NYGATS certificates in NYSERDA's NYGATS account to ensure transparency and consistency in the inventory clearance approach.

c. Eligible Purchasers and Transferability

As in 2017, NYSERDA and Staff propose that only RES-obligated LSEs may purchase RECs from NYSERDA for the 2018 compliance year. For 2017, the CES August Order limited eligible purchasers to LSEs and did not allow such RECs to be transferred. The overarching principle stated in the CES August Order on this matter was that allowing NYSERDA-procured RECs to be traded could result in increased costs to ratepayers as a result of arbitrage (i.e., in the event of shortage, if non-LSEs could buy RECs from NYSERDA and resell to LSEs at a market price in excess of the NYSERDA purchase price). The CES August Order required Staff to recommend for 2018 and subsequent years whether NYSERDA-procured RECs

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[16] NYSERDA expects to file a Petition regarding its administrative funding for 2018.

[17] The price of 2017 vintage RECs remains in recognition of the shorter remaining life due to the Commission's established two year banking rule. Additionally, due to the uncertainty of the availability and quantity of 2017 vintage Tier 1 RECs, those RECs could not be included in the mix of 2018 vintage Tier 1 RECs when setting the 2018 Tier 1 REC price.

should be tradable as part of an implementation proposal, and parties should be prepared to comment on the concern that trading of NYSERDA procured RECs may result in increased cost through arbitrage.

The recent VDER Order provided similar guidance for the near-term, establishing restricted REC transferability (defined as tradable, sellable and/or monetizable) rules for distributed energy resources (DER) under Tier 1 of the RES for existing net metered projects as well as those installed under now-available VDER Phase One NEM and VDER Phase One Value Stack tariffs. The VDER Order also provided that in future Phase Two VDER tariffs, significantly more transferability would be necessary.

A near term change in REC transferability rules under the RES would be out of alignment with the VDER Order and the expected evolution of REC transferability rules in future years. Therefore, as in the 2017 compliance period, Tier 1 RECs purchased by LSEs from NYSERDA for the 2018 compliance period will not be transferrable, except as established in the VDER Order, which identified the circumstances under which NYGATS Certificates designated as "non-transferrable," may still be transferred in certain contexts and for certain purposes.[18]

d. Sale Method

In the 2018 compliance year, LSEs will continue to have several options to fulfill and demonstrate their Tier 1 RES obligation: purchasing RECs from NYSERDA; self-supplying RECs; procuring Tier 1 RECs directly through agreements with renewable energy resources or intermediaries; paying ACPs; or a combination of these options.

The Tier 1 REC sale process implemented by NYSERDA for the 2017 compliance period required the rapid development of new processes and procedures with an overarching goal of basic functionality and timely execution. As envisioned in the CES August Order[19], NYSERDA and Staff have identified streamlined approaches to reduce the administrative burden of NYSERDA Tier 1 REC sales for both participating LSEs seeking to meet their compliance obligation and NYSERDA staff facilitating the sale of RECs to the participating LSEs.

The process for executing the 2018 REC sale offerings to LSEs as described above will be streamlined by expanding the communications functionality of the existing NYGATS platform. NYGATS is the tracking and accounting platform for the generation produced and consumed in New York and its functions include: registering and establishing accounts for generators, LSEs and other market participants interested in trading certificates, issuance or "minting" of certificates, implementing transfers of certificates between accounts, and settlement associated with load for purposes of compliance with the individual tiers of the CES, and for the Environmental Disclosure Program. NYGATS became fully functional in 2016 and is capable of minting certificates for the attributes of electric energy produced as of January 1, 2016. Consistent with best practices and conventions used in other competitive market states with similar LSE obligations, per the CES August Order, compliance with the RES will be facilitated by reliance on procurement and retirement of certificates created and tracked in NYGATS.

i. Quarterly Sale Process

For the 2018 compliance period, following each calendar quarter, NYSERDA will make available to LSEs through the NYGATS platform relevant information regarding:

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[18] VDER Order, p. 61.
[19] CES Order, p. 109.

1. The total quantity and vintage of NYSERDA Tier 1 RECs available for sale to LSEs (which may include unsold RECs from previous sale events);
    a. NYSERDA will establish a quarterly right-of-first-refusal Tier 1 REC quantity for each LSE, based on the LSE's most recent annual load share ratio.
    b. NYSERDA may allow LSEs to place orders in excess of their right-of-first-refusal REC quantity, subject to REC availability.
2. The sale price at which these Tier 1 RECs are offered (for vintage 2018 Tier 1 RECs, to be determined before the end of 2017 as discussed above; for vintage 2017 Tier 1 RECs, $21.16 per Tier 1 REC);
3. The most recently available annual load and the 2018 RES Tier 1 obligation percentage for each participating LSE;
4. The quantity of Tier 1 RECs already available to the LSE for compliance in their relevant NYGATS subaccounts; and
5. Any other relevant information which would aid in an LSE's understanding of its status toward RES compliance.

If an LSE desires to purchase RECs from NYSERDA, it will use the NYGATS platform to submit a request for its desired number of RECs by electronically accepting the terms and conditions of sale.

1. If the order is entered for a quantity which does not exceed the right-of-first refusal Tier 1 REC limit, NYSERDA will approve the request.
2. If the order is entered for a quantity which exceeds the right-of-first refusal Tier 1 REC quantity, NYSERDA will review the order compared to the total number of RECs available after all right-of-first refusal orders are filled. If additional RECs are available but in insufficient quantity to fulfill all requests, NYSERDA will allocate and sell remaining RECs on a pro-rata basis to all the LSEs requesting RECs beyond their right-of-first- refusal limit.
3. The LSE will have 5 days to transfer the funds to NYSERDA. NYSERDA will transfer the RECs to the LSEs designated subaccount within 3 business days of receipt of funds. If after 5 business days the full funds have not been transferred to NYSERDA, NYSERDA shall cancel the request and make the RECs available through the current or a future quarterly sale process.

4. RES LSE Obligation Design Issues

4.1. Alternative Compliance Payment (ACP)

Consistent with the CES August Order, LSEs may submit an ACP as an alternative for demonstrating compliance with RECs. The ACP is not a penalty for noncompliance; rather, it is an alternative avenue to compliance. In effect, it caps the total cost of the RES because LSEs will have no need to incur costs in excess of the ACP. ACP payments will be made to NYSERDA during the reconciliation period for each annual compliance period.

While the CES August Order established such principles and a process for their effectuation for the 2017 compliance period, the order also required Staff to propose a methodology for establishing the ACP for the Commission's consideration for subsequent years as part of the implementation phase of the CES.

a. ACP Level

The CES August Order established an overarching objective for regional consistency in ACP requirements, given that the alignment or divergence of ACP requirements can materially affect the cost of compliance and that regional markets enabled through consistency of state requirements can contribute to reducing the cost of achieving the RES goal. In addition, LSEs benefit from long-term visibility of the ACP level, which allows them to make rational retail pricing, REC procurement and REC banking or withdrawal decisions. However, in line with many other tenets of this implementation plan, other features of the RES need to be fully developed prior to establishing a long-term trajectory for the ACP. To provide LSEs with a static maximum price exposure against which to assess its REC purchase decisions, it is critical that the ACP be established prior to the start of the compliance year and be held constant at that level.

The proposed approach for the 2018 compliance period will provide the marketplace with a transitional level of certainty while providing the ability to consider evolving RES design and market conditions in establishing a long-term approach to setting the ACP applicable in subsequent years. In developing the methodology for establishing the ACP for the 2018 compliance period, Staff and NYSERDA propose a similar method as was utilized in the 2017 compliance period, but refined for the new approach to NYSERDA REC sale timing and frequency.

For the 2018 compliance period, by December 1, 2017, NYSERDA will file the 2018 ACP price in a filing with the Commission and post the ACP price on its website. The 2018 ACP will be calculated in consultation with Staff, based on the projected weighted average cost per MWh that NYSERDA expects to pay to acquire the Tier 1 RECs expected to be offered in 2018 (the 2018 Tier 1 REC sale price), plus any Commission-approved administrative adder, (if applicable), plus 10 percent. The ACP will remain constant throughout 2018 and be paid directly to NYSERDA for the disposition described below.

b. Disposition of ACP Funds

As required by the CES August Order, disposition of ACP payments must always be applied to the benefit of consumers by reducing the cost of the RES program. The CES August Order required Staff, as part of an implementation proposal, to consider the ways this policy can be achieved and will make recommendations for consideration by the Commission.

In considering the Commission's stated objective, it is most prudent to allocate the ACP funds toward offsetting the cost of achieving the RES goals. While it is unlikely that NYSERDA will collect significant funds associated with ACPs in the early years of the RES obligation, it is important to establish an equitable and simple process for the disposition of these funds. It is most logical and prudent to use collected ACP revenues to reduce or defer the need for NYSERDA to invoke the provision in the CES August Order and refined in a November 2016 Order[20] whereby electric distribution companies are required to provide a customer funded financial backstop mechanism to ensure payments will be made to REC and ZEC generators. This approach will ensure that any ACP revenues are used to directly and equitably offset ratepayer costs.

[20] Case 15-E-0302, Proceeding to Implement a Large-Scale Renewable Program and a Clean Energy Standard, Order Approving Administrative Cost Recovery, Standardized Agreements and Backstop Principles, issued and effective November 16, 2016.

c. REC Banking

Tier 1 REC banking rules will largely remain unchanged for 2018. Regarding banking of RECs for RES compliance, in 2018 NYSERDA will continue to be authorized to bank Tier 1 RECs for two subsequent compliance periods.

In 2018, to meet the required percentage for Tier 1 of the RES in any compliance period, obligated LSEs may use NYGATS certificates associated with a given Vintage in the two subsequent Vintage compliance periods (banked certificates), subject to the following limitations:

1. Only obligated LSEs, and no other market participants, may bank excess certificates above the current year's Tier 1 RES LSE obligation towards future RES LSE obligation compliance. Such banked certificates may not be transferred.
2. The obligated LSE is in compliance with the RES for all previous compliance periods.
3. Banked certificates are in excess of the number of certificates needed in the compliance period in which they were generated, and such excess NYGATS certificates have not previously been used for compliance with the RES, and have not been otherwise transferred to other parties.
4. Tier 1 NYGATS certificates banked in 2018 may not exceed sixty percent (60%) of the LSE's compliance obligation for 2018. This banking limitation may be revised for future compliance years.[21]

Given the recently adopted banking rules for 2017[22] and this proposal for continuation of these banking rules for 2018 along with a process to for LSEs to purchase Tier 1 RECs from NYSERDA after they are minted in NYGATS, there will not be a need for excess RECs held by LSEs at the end of the 2018 compliance year to be sold back to NYSERDA at cost if not needed to demonstrate compliance as was the case in 2017 per the CES August Order. Therefore, the NYSERDA REC buyback process will be discontinued for 2018.

5. Other Tier 1 RES Procurement Design Features

5.1. 2018 Threshold Eligibility Requirements

As described in the *Clean Energy Standard Final Phase 1 Implementation Plan*, criteria for procurement and evaluation processes for the Tier 1 RES long term procurements by NYSERDA are expected to evolve over time. NYSERDA and Staff propose the following modifications to the threshold eligibility requirements for the 2018 and subsequent solicitations.

a. Aggregation

There are two categories of facilities for which aggregation of facilities of the same technology and approximate vintage at different locations, for purposes of NYSERDA's RES REC procurements, might be merited. First, pursuant to the VDER Order, most categories of distributed energy resources will be

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[21] Banked NYGATS certificates were produced by the generation of electrical energy sold to New York retail customers during the compliance period in which they were generated; and have not otherwise been, nor will be, sold, retired, claimed or represented as part of electrical energy output or sale, or used to satisfy obligations in jurisdictions other than New York, or be used to substantiate any voluntary program claims.

[22] Case 15-E-0302, Proceeding to Implement a Large-Scale Renewable Program and a Clean Energy Standard, Order Approving Phase 1 Implementation Plan issued and effective February 22, 2017. p. 31.

ineligible for a NYSERDA RES Tier 1 contract award. The exception is those RES Tier 1-eligible facilities availing themselves of pre-existing NEM tariffs. While there may be few such facilities, if such facilities were to bid into NYSERDA RES procurements individually, the overhead and contracting costs to bidders and the contracting and administration costs to NYSERDA could be prohibitive.

Second, there are economies of scale that can be realized by developing and financing renewable energy projects. For projects interconnected on the utility side of the retail meter, whether to distribution or transmission facilities, there may also be situations in which developers may wish to propose a package of facilities as a single aggregated bid. Developers of projects using solar photovoltaics and other eligible technologies that may be sited on non-contiguous parcels and/or interconnected at different points of injection may nonetheless be able to take advantage of joint equipment and service purchasing, permitting, design and financing in order to reduce costs and offer competitive bids.

Accommodating aggregations in NYSERDA REC procurements introduces several administrative complexities in solicitation, evaluation, and contracting. NYSERDA and Staff propose to define, develop and implement an approach to allowing aggregation of multiple projects of same technology and approximate vintage into single bids. NYSERDA will consider an approach that balances aggregation value capture and administrative complexity. Staff and NYSERDA invite parties to comment on this proposed modification.

b. Co-Located Facilities

Renewable energy project developers may wish to co-locate facilities using different eligible renewable energy technologies for a variety of reasons. For example, pairing technologies with complementary production profiles may result in a less intermittent combined profile and a project that may also benefit from common land, power conversion equipment (such as inverters) or interconnection facilities, thereby reducing overall installed cost or providing additional operational flexibility.

For the reasons delineated above, there may be benefits to allowing paired facilities co-located, configured and metered as single facility to offer RECs to NYSERDA under a single bid. Accommodating such bids may require updates or changes to NYISO metering, NYGATS, and NYSERDA's RES solicitation, evaluation, and contractual agreements. Prior to developing an approach for Co-located Facilities in 2018 solicitations, NYSERDA and Staff seek comment from potentially interested parties offering examples of how co-located renewable energy facilities might be configured. In response to this Phase 2 Implementation Plan Proposal, potentially interested parties may describe proposed configurations and a description of the benefits of coupling for the Commission's consideration.

c. Returned-to-Service and Relocated Facilities

The Final Phase 1 Implementation Plan described eligibility for Returned-to-Service and Relocated facilities, which were deemed eligible for the 2017 Tier 1 REC solicitations, subject to limitations on maximum contract duration based on their original commercial operation dates. Facility owners often refurbish such facilities, investing in material capital expenditures, to allow such facilities to operate as if newer, beyond their original expected useful lives. Bringing such facilities, which are not contributing to the historical baseline, into operation in New York (or delivering energy into New York) may allow for the introduction of additional renewable energy that would not otherwise be generated. However, without access to a reliable revenue stream (e.g., a long-term REC contract), project owners or developers may be unwilling to make the refurbishment investments. Furthermore, if the maximum contract duration limitation is applied as in 2017, then such facilities will likely be unable to make the investments to create additional renewable energy generation.

NYSERDA proposes to develop thresholds for minimum refurbishment investment and lifetime extension, which if met or exceeded, would allow returned-to-service and/or repowered facilities to qualify either as if new, or for a portion of the maximum contract duration for a new facility. Staff and NYSERDA invite parties to comment on this proposed modification.

d. Contractual Opt-Out Provisions

Under the Main Tier RPS standard contracts, the seller had an option to suspend performance with respect to its obligations to deliver environmental attributes to NYSERDA for selling the environmental attributes into the voluntary market in New York or to a New York state government agency. If such an option was exercised, NYSERDA would not be obligated to pay for these attributes, and the amount sold under this provision would be credited to Seller's contractual quantity obligations to NYSERDA. The February 22, 2017 Order suggested that continuation of this provision under the RES required further consideration since it could have implications on the final disposition of Tier 1 RECs sold in the voluntary market and LSE compliance obligations. Therefore, the opt-out feature was not adopted for Phase 1 implementation and NYSERDA and Staff were directed to consider this issue and any related parameters in a subsequent implementation plan proposal prior to NYSERDA issuing a 2018 Tier 1 REC solicitation.

In general, allowing unlimited suspension would be averse to electric ratepayers, as it turns a NYSERDA contract into an effective put option for the generator. With this right intact, if a generator suspends performance, it would likely be to the detriment of NYS ratepayers, as it would most likely occur during market shortage (thus exposing ratepayers to shortage pricing or ACPs).

The CES August Order emphasizes the Commission's interest in stimulating voluntary contracting for renewable energy in furtherance of the 50 by 2030 goal. NYSERDA may consider, for the 2018 REC solicitations, introducing a modified Seller right of suspension, subject to (i) a substantial minimum duration sufficient to assure that voluntary activity is enhancing renewable energy demand rather than arbitraging the NYSERDA contract while increasing overall ratepayer costs; and (ii) requiring that such an option can only be exercised upon NYSERDA's consent. Furthermore, NYSERDA would only consent to such a suspension upon the Seller submitting to NYSERDA documentation of an alternative transaction that convinced NYSERDA that such a suspension was in the public interest.