



NYSERDA

Clean Energy Standard 2017 LSE Obligations and REC/ZEC Purchases from NYSERDA

November 22, 2016

Agenda

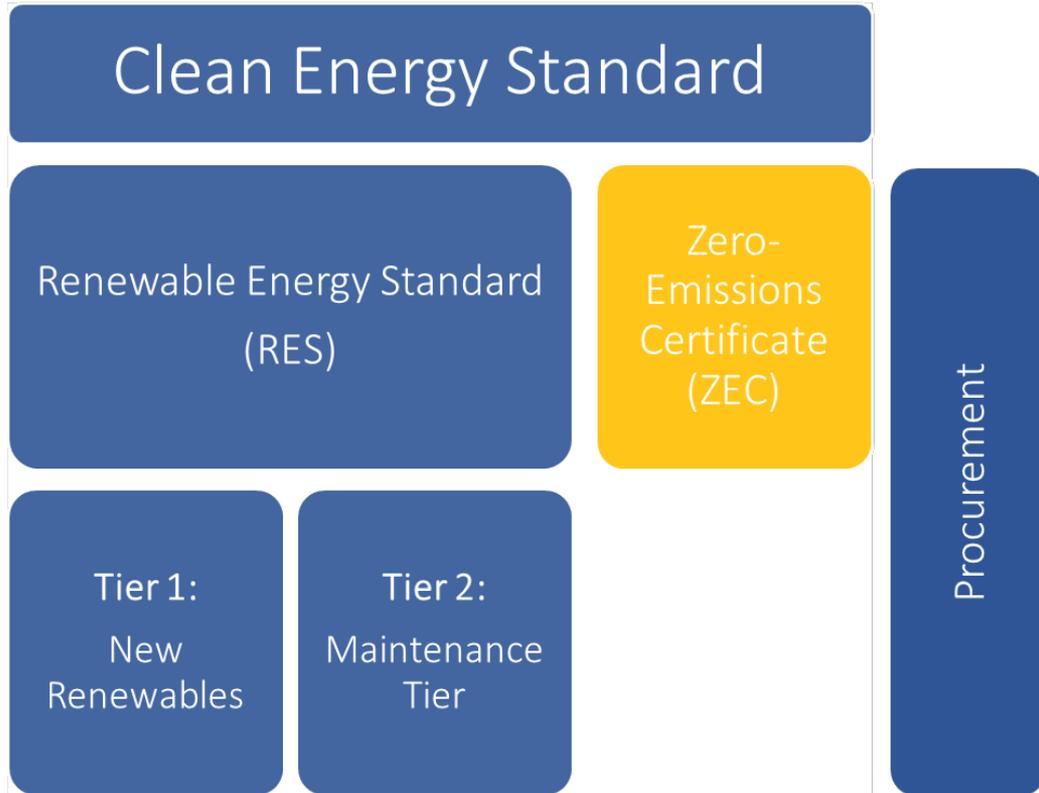
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Clean Energy Standard - Overview

Clean Energy Standard (CES)

- By Order issued August 1, 2016, the Public Service Commission adopted the State Energy Plan (SEP) goal that 50% of New York's electricity is to be generated by renewable sources by 2030 as one strategy to reduce GHG emissions 40% by 2030.
- The Clean Energy Standard (CES) anticipates a series of initiatives including, but not limited to, obligations upon LSEs and opportunities for voluntary contributions, all of which will contribute to attaining the 50 by 30 goal.
- The Order provides for two mandated requirements:
 - a Renewable Energy Standard (RES) requirement, and
 - a Zero-Emissions Credit (ZEC) requirement.
- The RES component and the ZEC component are interrelated but the goals are additive.
 - ZECs will not count toward satisfying the 50% by 2030.

Clean Energy Standard ZEC Program



- ❖ Multi-year contract from NYSERDA
- ❖ LSE Obligation
 - Compliance through acquisition of ZECs (tracked through NYGATS)
 - Additional to the 50% Renewable Energy Standard
- ❖ Eligibility:
 - Existing at-risk nuclear zero-emissions attributes

LSE ZEC Obligation

- The LSE ZEC obligation is designed to ensure that enough revenues are in place so that the plants continue to operate and produce carbon-free emissions.
- ZEC cap = 27,618,000 per year.
 - Based on July 2015 – June 2016 output.
 - If not all owned by same owner, then separate limits for each owner.
- If fewer MWh are produced, then the level of required ZEC purchases goes down.
- Each LSE will be responsible for purchasing ZECs equal to their load share percentage for the entire State.
- The annual compliance period is April 1 - March 31.

Renewable Energy Standard (RES) Tier 1

Clean Energy Standard

Renewable Energy Standard
(RES)

Zero-
Emissions
Certificate
(ZEC)

Tier 1:
New
Renewables

Tier 2:
Maintenance
Tier

Procurement

- ❖ LSE mandates
- ❖ Compliance through acquisition of RECs (tracked through NYGATS) or Alternative Compliance Payments (ACP)
- ❖ Eligibility:
 - Technological requirements similar to existing RPS Main Tier
 - Behind-the-meter eligibility TBD
 - COD 1/1/2015 or after
 - Adjacent control areas eligible (require energy deliverability)
- ❖ Long term contracting by NYSERDA

LSE Tier 1 Obligation

- The cornerstone of the RES is the obligation placed on all LSEs under the Commission's jurisdiction to acquire an increasing portion of their annual retail load from new (in service after December 31, 2014) renewable resources.
- The Order set, through 2021, the annual goal in total statewide MWh translated as a percentage of each LSEs load:

Year	CES goal	
	MWh	Percentage of LSE Load
2017	974,000	0.6%
2018	1,741,270	1.1%
2019	3,124,100	2.0%
2020	5,302,371	3.4%
2021	7,530,642	4.8%

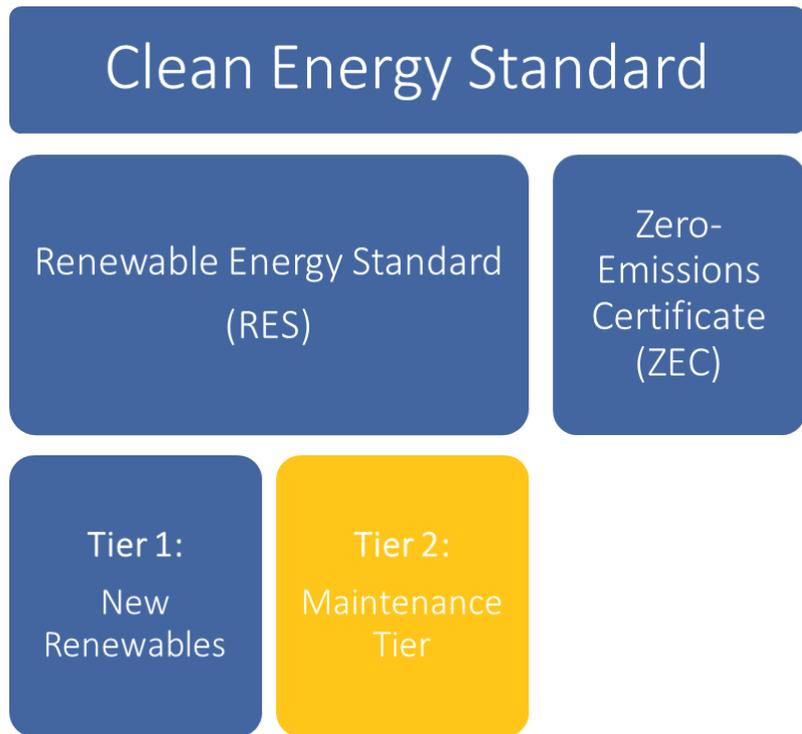
LSE 2107
Obligation
(0.035%)
Clarified in
November 17,
2016 Order
(next section)



LSE Tier 1 Obligation

- An LSE may satisfy its obligation by one of the following ways:
 - LSEs may purchase RECs from NYSERDA;
 - The Commission directed NYSERDA to conduct Tier 1 REC procurement solicitations at least once annually.
 - LSEs may enter directly into agreements, including long-term power purchase agreements (PPAs), with renewable energy resources;
 - LSEs may pay an alternative compliance payment (ACPs);
- Or some combination of the three.

Renewable Energy Standard (RES) Tier 2



- ❖ Elimination of proposed Tier 2A
- ❖ Extension of current RPS Maintenance Resource Program
- ❖ Financial support, through open book Maintenance Contracts, to facilities at risk of financial failure or retirement
- ❖ No tradable attributes

Updates Based on November 17, 2016 Commission Orders

November 17, 2016 Order

Issued in response to NYSERDA Petition for Clarification

- 2017 Tier 1 RES Obligation on LSEs is equal to **0.035%** of total load served by an LSE during 2017.
 - Relates directly to the estimated number of Tier 1 RECs that NYSERDA will offer for sale in 2017 and projected 2017 compliance period load (details covered in a later section).
- The new renewable resources from NY Sun and other Customer Sited Tier projects are counted toward the 50% statewide renewable goal but are not included in the mandated quantity that the LSEs are mandated to procure in 2017.

November 17, 2016 Order

PSC approved:

1. Standard agreements for LSE purchase of RECs and ZECs from NYSERDA
 - Agreements to be executed by LSEs within 30 days of the Order issuance date (by December 19, 2016)
2. NYSERDA administrative budget for 2017
 - REC administration, system builds and cost recovery fee funded through repurposed funds
 - Administrative adder for ZEC purchases (\$0.0594/ZEC)

Approved Purchase and Sale Agreement – Terms and Conditions

November 17, 2016 Order - Purchase Agreements

Electronic execution using links provided by NYSERDA

- REC Agreement – executed at time order placed (by December 1)
 - NYSERDA provides confirmation of quantity to be delivered (early December)
 - NYSERDA provides payment schedule with confirmation
 - Payments to NYSERDA occur from January – December 2017
- ZEC Agreement – executed through links provided by NYSERDA (by December 19)
 - Quantity specified and payment schedule provided in e-mail communication from NYSERDA (early December)
 - Payments to NYSERDA occur from April 2017 – March 2018

NYSERDA REC Sales to LSEs

Timeline - 2016 Tier 1 REC Sales

- **November 2 – December 1, 2016** – NYSERDA interface is available for LSEs to sign up to buy RECs
- **December 2 – 15, 2016** – NYSERDA evaluates REC orders and determines contracted values
- **By December 15, 2016** – REC agreements are sent to LSEs by NYSERDA with schedule of payments
- **January 2017** – REC Payments to NYSERDA commence
- **Quarterly throughout 2017** – NYSERDA will transfer purchased and available RECs to LSEs in the New York Generation Attribute Tracking System (NYGATS)
- **January – June 2018** – 2017 REC Reconciliation Period
- **June 2018** – ACPs are due to NYSERDA

NYSERDA Communication to LSEs Regarding REC sales *(Email dated November 2, 2016)*

- LSEs may elect to purchase Tier 1 RECs from NYSERDA to meet their compliance obligations.
- LSEs opting to purchase RECs from NYSERDA for the 2017 compliance year must notify NYSERDA by **December 1, 2016** using the link and details in the November 2nd email.
- LSEs are guaranteed the minimum quantity of RECs as indicated in the referenced email.
 - LSEs may request to purchase more RECs, subject to availability.
- After December 1, 2016, NYSERDA will confirm the quantity and the payment schedule in accordance with the terms and conditions.
- In the absence of procuring 2017 Tier 1 RECs, LSEs may also fulfill their 2017 RES compliance obligation by making an alternative compliance payment (ACP) to NYSERDA in early 2018.

NYSERDA filing regarding 2017 REC Sales

- Filed under Case 15-E-0302 on November 1, 2016
- Available on NYSERDA's website at nyserdera.ny.gov/clean-energy-standard
- Directly correlates with 0.035% Tier 1 LSE RES Obligation clarified in November 17, 2016 Order

2017 Tier 1 RECs to be offered for sale by NYSERDA	2017 Tier 1 REC Price	2017 ACP Price
56,142	\$21.16	\$23.28

NYSERDA Communication to LSEs

Regarding REC sales *(Email dated November 2, 2016)*

Legal entity name:	LSE XYZ
Electric Energy Load Served by LSE During Base Year ended 3/31/2016:	500,000 MWh
LSEs Percentage of Statewide Electric Energy Load:	0.3230%
LSE Minimum REC Quantity Available:	181
ISO Abbreviation:	XYZ

$$56,142 \times .3230\% = 181$$

NYSERDA will guarantee LSE XYZ 181 Tier 1 RECs should the LSE submit an order to NYSERDA by 12/1/16. The LSE may also request more RECs, subject to availability and confirmation by NYSERDA.

Example 1 – Actual Obligation Larger than Forecast

The Public Service Commission's August 1, 2016 Order Adopting a Clean Energy Standard stated that each LSE's RES obligation would be determined by multiplying the LSE's actual load served in the Compliance Period times the Compliance Obligation Percentage.

Example:

Legal entity name:	LSE XYZ
LSE XYZ Tier 1 RECs Purchased from NYSERDA during 2017:	181
LSE XYZ <u>Actual</u> Load for 2017 Compliance Period (MWh):	550,000
RES Tier 1 Compliance Obligation Percent:	0.035%
LSE XYZ RES Tier 1 Compliance Obligation for 2017 Compliance Period:	193
Additional Tier 1 RECs or ACPs necessary for LSE XYZ RES compliance:	12

Load increased
50,000 MWh
from forecast

- If available, LSE may purchase additional RECs from NYSERDA at 2017 Tier 1 REC price.
- LSE may purchase additional RECs from another LSE or 3rd party.
- LSE may pay ACPs.

Example 2 – Actual Obligation Smaller than Forecast

Example:	Legal entity name:	LSE XYZ
	LSE XYZ Tier 1 RECs Purchased from NYSERDA during 2017:	181
	LSE XYZ <u>Actual</u> Load for 2017 Compliance Period (MWh):	450,000
	RES Tier 1 Compliance Obligation Percent:	0.035%
	LSE XYZ RES Tier 1 Compliance Obligation for 2017 Compliance Period:	158
	Excess Tier 1 RECs held by LSE XYZ:	23

Load decreased
50,000 MWh
from forecast

- LSE may sell excess RECs back to NYSERDA at cost (\$21.16/MWh)
- LSE may bank excess RECs (subject to Commission approval)

Example 3 – NYSERDA has fewer RECs than Projected

Example:	NYSERDA 2017 Tier 1 RECs Ordered by LSEs	56,142	
	LSE XYZ Tier 1 RECs Purchased from NYSERDA during 2017:	181	
	<u>Actual</u> NYSERDA 2017 Tier 1 RECs:	40,000	← RECs decreased 16,142 MWh
	LSE XYZ RES Tier 1 Compliance Obligation for 2017 Compliance Period:	181	
	Tier 1 RECs actually available from NYSERDA:	129	
	LSE XYZ RES Tier 1 ACP Quantity:	52	← ACP available at REC price

- In the event of a NYSERDA REC shortfall, RECs will be distributed proportionally to REC orders received by NYSERDA.
- As long as an LSE submits a REC Order by December 1, 2016, LSEs may pay ACPs at the REC price of \$21.16/MWh for any shortfall.

NYSERDA ZEC Sales to LSEs

Timeline – ZEC Sales

- **Early December, 2016** – NYSERDA will contact LSEs with a process to execute mandatory agreements with NYSERDA to purchase ZECs
- **By December 19, 2016** – ZEC agreements are sent to NYSERDA by LSEs
- **By December 31, 2016** – NYSERDA finalizes ZEC agreements with all LSEs by providing schedule of payments
- **April 2017** – ZEC Payments to NYSERDA commence
- **Quarterly throughout 2017/2018** – NYSERDA will transfer purchased and available ZECs to LSEs in the New York Generation Attribute Tracking System (NYGATS)
- **April – September 2018** – 2017/2018 ZEC Reconciliation Period

2017/2018 ZEC Sales

2017/2018 Maximum ZEC quantity to be purchased by NYSERDA (MWh)	2017/2018 ZEC Price*
27,618,000	\$17.5394

*ZEC Price = \$17.48 (NYSERDA purchase price) +
\$0.0594 (Commission Approved Adder)

Example 4 – Additional ZECs required for compliance

The Public Service Commission's August 1, 2016 Order Adopting a Clean Energy Standard stated that each LSE's ZEC obligation would be determined by multiplying the LSE's actual percent of load served in the Compliance Period times the ZEC Quantity actually purchased by NYSERDA.

Example:	Legal entity name:	LSE XYZ
	LSE XYZ <u>Estimated</u> Load for 2017/2018 Compliance Period (MWh)	500,000
	LSE XYZ <u>Estimated</u> Percent of Statewide Load for 2017/2018 Comp Period:	0.3230%
	Maximum ZEC Quantity purchased by NYSERDA:	27,618,000
	LSE XYZ ZEC Purchases from NYSERDA for the 2017/2018 Compliance Period:	89,206
Changes from Estimates	LSE XYZ <u>Actual</u> Load for 2017/2018 Compliance Period (MWh):	550,000
	LSE XYZ <u>Actual</u> Percent of Statewide Load for 2017/2018 Compliance Period:	0.34%
	<u>Actual</u> ZEC Quantity purchased by NYSERDA:	27,000,000
	LSE XYZ ZEC Compliance Obligation for 2017/2018 Compliance Period:	91,800
	Additional ZECs to be Purchased from NYSERDA During Settlement:	2,594

Example 5 – Excess ZECs acquired by LSE

The Public Service Commission's August 1, 2016 Order Adopting a Clean Energy Standard stated that in the event the actual ZEC Quantity purchased by NYSERDA is less than the Maximum ZEC Quantity, LSEs will be refunded for excess ZEC purchases.

Legal entity name:	LSE XYZ
LSE XYZ <u>Estimated</u> Load for 2017/2018 Compliance Period (MWh)	500,000
LSE XYZ <u>Estimated</u> Percent of Statewide Load for 2017/2018 Comp. Period:	0.3230%
Maximum ZEC Quantity purchased by NYSERDA:	27,618,000
LSE XYZ ZEC Purchases from NYSERDA for the 2017/2018 Compliance Period:	89,206
LSE XYZ <u>Actual</u> Load for 2017/2018 Compliance Period (MWh):	500,000
LSE XYZ <u>Actual</u> Percent of Statewide Load for 2017/2018 Compliance Period:	0.3230%
<u>Actual</u> ZEC Quantity purchased by NYSERDA:	25,000,000
LSE XYZ ZEC Compliance Obligation for 2017/2018 Compliance Period:	80,750
LSE Excess ZECs	8,456
NYSERDA refund to LSE XYZ (at \$17.5394/ZEC):	\$148,313.17

Change
from
Estimate



CES Phase 1 Implementation Plan

Phase 1 Implementation Plan

- Filed jointly by DPS and NYSERDA on October 31, 2016 for public comment and Commission decision-making.
- DPS will hold a webinar December 2, 2016 to review the Implementation Plan in detail – sign up by email ces@dps.ny.gov
- Comments due January 3, 2017.
- Proposes the following details and processes regarding:
 - RES Eligibility
 - Certification
 - Long Term Procurement for RECs
 - LSE Demonstration of Compliance
 - Reporting Requirements

REC and ZEC Banking

- ZECs – No Banking Allowed
- Tier 1 RECs
 - NYSERDA can bank for two years
 - LSEs can bank up to two subsequent compliance years
 - Banked certificates cannot exceed 30% of the certificates needed by the LSE for compliance in the year in which they were generated
 - LSEs can also sell excess Tier 1 RECs back to NYSERDA in 2017 (per Order)
- Borrowing is not permitted

Settlement/Compliance

- LSEs must demonstrate compliance with the CES's RES Tier 1 and ZEC programs for each compliance period for which a RES and ZEC LSE compliance target is established
 - Separate compliance timelines
 - NYGATS reports used for documentation
- LSEs should register in NYGATS
- ACP Payments under RES to NYSERDA
- State Compliance Reporting

Next Steps

Next Steps for 2016

- **By December 1, 2016** – LSEs submit Orders for Tier 1 RECs from NYSERDA.
- **Early December 2016** – NYSERDA will send an email to LSE contact with ZEC Agreement process execution details.
- **By December 15, 2016** – REC agreements are sent to LSEs by NYSERDA with schedule of payments.
- **By December 19, 2016** – ZEC agreements are sent to NYSERDA by LSEs.
- **By December 31, 2016** – NYSERDA finalizes ZEC agreements with all LSEs by providing schedule of payments.

Questions?

NYSERDA Clean Energy Standard Website:

<https://www.nyserda.ny.gov/clean-energy-standard>