

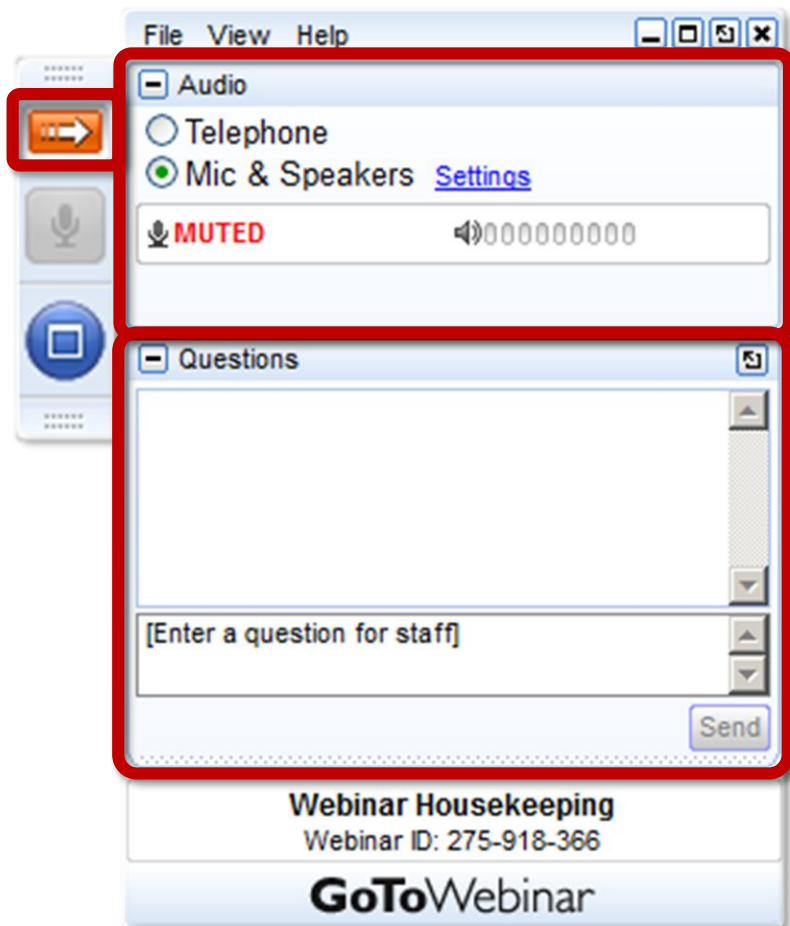
RPS Collaborative Webinar

New York's Clean Energy Standard

Hosted by
Warren Leon, Executive Director, CESA

June 7, 2017

Housekeeping



Use the red arrow to open and close your control panel

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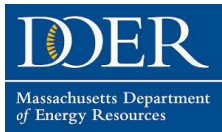
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Clean Energy States Alliance



RPS Collaborative

- With funding from the Energy Foundation and the US Department of Energy, CESA facilitates the **Collaborative**.
- Includes **state RPS administrators, federal agency representatives**, and other stakeholders.
- Advances dialogue and learning about RPS programs by **examining the challenges and potential solutions** for successful implementation of state RPS programs, including **identification of best practices**.
- To sign up for the Collaborative listserv to get the **monthly newsletter** and announcements of **upcoming events**, see: www.cesa.org/projects/state-federal-rps-collaborative



U.S. DEPARTMENT OF
ENERGY



Panelists

- **Doreen Harris**, Director of Large-Scale Renewables, NYSERDA
- **Abbey DeRocker**, Senior Project Manager for Large-Scale Renewables, NYSERDA





NYSERDA

New York's Clean Energy Standard

June 7, 2017

Clean Energy Standard Overview

NY State Energy Plan - 2030 Clean Energy Goals

40%

Reduction

in GHG emissions
from 1990 levels

Reducing greenhouse gas (GHG) emissions from the energy sector—power generation, industry, buildings, and transportation—is critical to protecting the health and welfare of New Yorkers and reaching the longer term goal of decreasing total carbon emissions 80% by 2050.

50%

Generation

of electricity from
renewable energy sources

Renewable resources, including solar, wind, hydropower, and biomass, will play a vital role in reducing electricity price volatility and curbing carbon emissions.

23%

Decrease

in energy consumption in
buildings from 2012 levels

Energy efficiency results in lower energy bills and is the single most cost-effective tool in achieving New York's greenhouse gas reduction objectives. A 23% decrease from 2012 levels is equivalent to 600 trillion British thermal units (Btu) of energy efficiency gains.

New York's Clean Energy Standard (CES)

- By Order issued August 1, 2016, the New York Public Service Commission adopted the State Energy Plan (SEP) goal.
- The CES includes obligations upon LSEs and opportunities for voluntary contributions.
- 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 goals are additive.
 - ZECs will not count toward satisfying the 50% by 2030 goal.
- A series of implementation plans will ensue.

NY State RPS vs. RES

| | Renewable Portfolio Standard | Renewable Energy Standard |
|------------------|---|---|
| Procurement size | <ul style="list-style-type: none"> Budget-driven Target of 9.5 million Main Tier RECs over 2005-2015, 10th solicitation ~356,000 MWh | <ul style="list-style-type: none"> Volumetrically driven Typical procurement up to 5 times the size of previous RPS procurements |
| Cost | \$150-\$200 Million | \$1 billion or more annually |
| Eligibility | Main Tier -Biogas/Biomass, Fuel Cells, Hydroelectric, Solar, Tidal/Ocean, and Wind | <ul style="list-style-type: none"> Same as RPS plus imports, relocated and returned to service facilities, and no size limit on run of river hydro Sellers need Tier 1 Certification to participate in NYSERDA procurements |
| Evaluation | 2 Categories for Evaluation: <ul style="list-style-type: none"> Bid Price = 70% Economic Benefits = 30% | 4 Categories for Evaluation <ul style="list-style-type: none"> Bid Price = 70% Economic Benefits = 10% Project Viability = 10% Operational Flexibility & Peak Coincidence = 10% |
| Compliance | <ul style="list-style-type: none"> Central procurement by NYSERDA only | <ul style="list-style-type: none"> LSEs may procure RECs from NYSERDA, independently or submit ACP |
| Contracting | <ul style="list-style-type: none"> Two standard contracts <ul style="list-style-type: none"> fuel non-fuel | <ul style="list-style-type: none"> One modular standard contract NYGATS & NYGATS Operating Rules |

Renewable Energy Standard (RES) Tier 1

Clean Energy Standard

Renewable Energy
Standard
(RES)

Zero-
Emissions
Certificate
(ZEC)

Procurement

Tier 1:
New
Renewables

Tier 2:
Maintenance
Tier

- ❖ 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 determined through Value of Distributed Energy Resource proceeding
 - COD 1/1/2015 or after
 - Adjacent control areas eligible (require energy delivery)
- ❖ Long-term contracting by NYSERDA



NYSERDA

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 Tier 2

Clean Energy Standard

Renewable Energy
Standard
(RES)

Zero-
Emissions
Certificate
(ZEC)

Procurement

Tier 1:
New
Renewables

Tier 2:
Maintenance
Tier

- ❖ 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
- ❖ Eligibility change recommendations prior to triannual review

Zero Emissions Certification (ZEC) Program

Clean Energy Standard

Renewable Energy
Standard
(RES)

Zero-
Emissions
Certificate
(ZEC)

Procurement

Tier 1:
New
Renewables

Tier 2:
Maintenance
Tier

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

Phase 1 Implementation Plan

Phase 1 Implementation Plan

- Draft plan filed jointly by New York State Department of Public Service and NYSERDA on October 31, 2016 to allow for public comment and Commission decision-making
- Final plan filed on March 24, 2017
- Determines CES details and processes regarding:
 - RES Eligibility
 - Certification
 - Long Term Procurement for RECs (Process and Evaluation Criteria)
 - LSE Demonstration of Compliance
 - Reporting Requirements

Tier 1 Eligibility

- Per the August CES Order, Tier 1 eligibility mirrors the current Renewable Portfolio Standard (RPS) Main Tier with two exceptions:
 - The former 30 MW limit on hydro facilities is eliminated
 - Eligibility is expanded to generation that is delivered to New York
- Additional details are included in the final implementation plan regarding the eligibility of:
 - Upgrades
 - Repowering

Tier 2 Eligibility

- Provide support to those “at risk” eligible facilities which, if not for the support, are demonstrated to be economically inviable without such support.
- Tier 2 Maintenance Resource eligibility:
 - Currently operating run-of-river hydroelectric facilities of 5 MWs or less, wind turbines, and direct combustion biomass facilities that comply with eligible fuel source requirements for Tier 1 eligibility.
 - Commercial operation prior to January 1, 2003 and the output must have been originally included in New York’s baseline of renewable resources as of that date.
- Process is similar to RPS Maintenance Resource program.
- December 2016 Order reinitiated consideration of Tier 2 issues.

Renewable Energy Standard Certification

- Certification is a prerequisite for generation facilities to participate in the RES program as an eligible resource.
- NYSERDA will perform all services related to the development, review, approval and ongoing validation of RES certification materials.
- NYSERDA developed a RES certification process modeled on the RPS Main Tier certification process:
 - Under RES, certification will be available on a continuous basis
 - Similar provisional and operational certification provisions.

ZECs

- Currently in first quarter of the first compliance year
- ZECs – No Banking Allowed
- Borrowing is not permitted
- ZECs sold on a prospective basis
 - ZECs produced
 - LSE load
- Settlement after load and ZEC minting is finalized

Settlement/Compliance/Reporting

- 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
 - New York Generation Attribute Tracking System (NYGATS) reports used for documentation
- Alternative Compliance Payments (ACPs) to NYSERDA
- State Progress Reporting

Phase 2 Implementation Plan

Phase 2 Implementation Plan

- Draft plan filed jointly by New York State Department of Public Service and NYSERDA on May 12, 2017 to allow for public comment and Commission decision-making.
- Proposes:
 - Revised Tier 1 LSE obligations for 2018 -2021
 - Proposes 2018 processes for
 - NYSERDA's Tier 1 REC Disposition, Pricing, Frequency, and Timing
 - Alternative Compliance Payment level, Disposition of ACP Funds, and REC Banking
 - Future Tier 1 RES Procurement Design Issues

RES Implementation Phase 1 vs. Phase 2

Proposed reduction in LSE Obligation to reflect change in Distributed Energy Resource eligibility:

| Year | Aug. 2016 Order | Phase 2 Proposal |
|------|-----------------|------------------|
| 2018 | 1.1% | 0.15% |
| 2019 | 2.0% | 0.78% |
| 2020 | 3.4% | 2.84% |
| 2021 | 4.8% | 4.20% |

RES Implementation Phase 1 vs. Phase 2

| | Phase 1 | Phase 2 |
|--------------|--|---|
| Eligibility | LSEs only | LSEs only |
| Notification | Manual process via e-mail | Via NYGATS |
| Contracting | Online | Online |
| REC price | <ul style="list-style-type: none"> • NYSERDA REC price for 2017 set November 2016 • Weighted average price of RECs NYSERDA is forecasted to obtain during 2017 | <ul style="list-style-type: none"> • NYSERDA REC price for 2018 set November 2017 • Weighted average price of RECs NYSERDA is forecasted to obtain during 2018 |
| Banking | <ul style="list-style-type: none"> • LSEs can bank excess RECs for 2 years • LSEs can sell excess RECs to NYSERDA | <ul style="list-style-type: none"> • LSEs can bank excess RECs for 2 years |
| Sales Method | <p>Prospective</p> <ul style="list-style-type: none"> • Forecasted amount of NYSERDA RECs • Forecasted LSE load • LSEs can purchase additional RECs | <p>Quarterly Sales</p> <ul style="list-style-type: none"> • NYSERDA will offer RECs in NYGATS account • LSEs will better know actual load • LSEs can purchase additional RECs • Unsold RECs will be offered in subsequent sales |

NYSERDA Purchase of New York Tier 1 Eligible RECs (RESRFP17-1)

Governor Cuomo Announces Major Climate and Jobs Initiative - www.governor.ny.gov

Governor Cuomo Announces Major Climate and Jobs Initiative in Partnership with the Worker Institute at Cornell University ILR's School and Climate Jobs NY to Help Create 40,000 Clean Energy Jobs by 2020

ENERGY

ENVIRONMENT

JOBS

SHARE

Initiative Will Accelerate Renewable Energy Growth With up to \$1.5 Billion Investment in Renewable Energy Projects

Largest Clean Energy Procurement by a State in U.S. History Strengthens New York's Position as National Leader on Climate Change

Establishes an Environmental Justice & Just Transition Working Group to Help Historically Underserved Communities Prepare for a Clean Energy Future and Adapt to Climate Change

New York State Solar Capacity Set to Double by End of 2018

Announcement Follows Governor's [Executive Order](#) Committing New York to Uphold the Standards Set Forth in the Paris Accord



NYSERDA

NYSERDA Long Term Procurement Requirements

| Year | Distribution Utilities & ESCOs | LIPA | NYPA | Direct Customers | Anticipated Procurement Target (MWh)* |
|------|--------------------------------|---------|---------|------------------|---------------------------------------|
| 2017 | 1,424,555 | 242,766 | 281,087 | 18,041 | 1,966,449 |
| 2018 | 1,464,801 | 249,624 | 289,028 | 18,551 | 2,022,004 |
| 2019 | 1,505,047 | 256,483 | 296,969 | 19,061 | 2,077,560 |
| 2020 | 1,545,293 | 263,342 | 304,911 | 19,570 | 2,133,116 |
| 2021 | 1,585,539 | 270,200 | 312,852 | 20,080 | 2,188,671 |

**RESRFP17-1
Procurement Target**

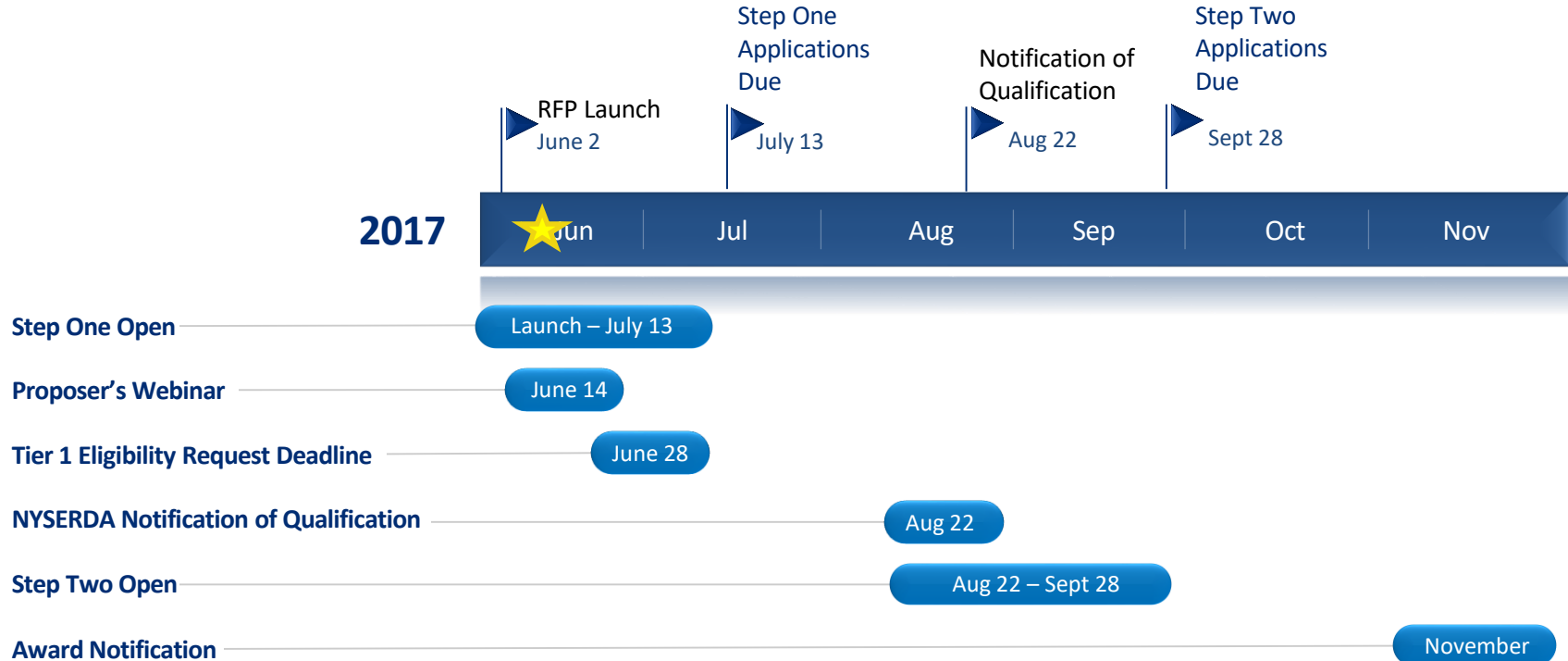
1,500,000 MWh

* Assumes that NYSERDA will be procuring RECs for NYPA and LIPA customer loads. In the event that NYPA and LIPA do not participate in NYSERDA's procurements, the procurement targets will be adjusted accordingly by reviewing the NYPA or LIPA portions shown in this table.



NYSERDA

RESRFP17-1 Timeline



Step One: Project Threshold Eligibility

- Establish project threshold criteria to send clear signal to market participants for project maturity expectations, fortify project pipeline, and minimize “false starts”
 - Must meet minimums (e.g., interconnection, permitting, site control) or face automatic rejection
- Leverage/harmonize existing development best practices to establish minimum maturity levels
- Require project self-certification plus documentation
- Requirements are intended to maintain a robust solicitation response & maintain cycle times

Step Two: Bid Proposal and Evaluation Criteria

- **Quantitative Ranking**
 - Price – 70% (maintained)
 - Economic Benefits – 10% (reduced from 30%)
 - Project Viability – 10%
 - Operational Flexibility and Peak Coincidence – 10%
 - Obtain Preliminary Rank Order
- **Technical Evaluation Panel (TEP)**
 - Consists of NYSERDA, Department of Public Service, and qualified Independent Evaluators
- **Application of Portfolio Risk Assessment**
 - Applied by NYSERDA management and Department of Public Service
 - Department of Public Service approval of results

Next Steps

Open Topics

- Long Term Tier 1 REC Disposition Design
 - ACP, etc.
- Tier 2
 - Eligibility for Repowered Facilities
- Distributed Energy Resources
 - Phase 2 Pending
- Offshore Wind
 - Integration into Clean Energy Standard

Thank you!

<https://www.nyserda.ny.gov/Clean-Energy-Standard>

Doreen Harris

Director, Large Scale Renewables

Doreen.Harris@nyserda.ny.gov

518-862-1090, x3337

Abbey DeRocker

Senior Project Manager, Large
Scale Renewables

Abbey.DeRocker@nyserda.ny.gov

518-862-1090, x3449



Thank you for attending our webinar

Warren Leon

RPS Project Director, CESA Executive Director

wleon@cleangroup.org

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