Agenda

- Introductions
- New York Generation Attribute Tracking System Updates
- 2018 Settlement Timeline
- APX update on NYGATS registry administration
- Stakeholder feedback and wrap-up
New York State Climate Leadership and Community Protection Act of 2019

> Most aggressive climate policy enacted by a major global economy
> Charts Path to a Carbon Neutral Economy by 2050
> 100% Clean Electricity by 2040, 70% Renewable Energy by 2030
> Codifies New York’s Clean Energy Targets into Law
> Establishes the first Statutory Climate Action Council
> Landmark Commitments to Environmental Justice and Just Transition
CLCPA by the Numbers, Targets Codified into Law

Carbon neutral economy by 2050, mandating at least an 85 percent reduction in emissions below 1990 levels

40 percent reduction in emissions by 2030

100 percent clean electricity by 2040

70 percent renewable electricity by 2030

9,000 MW of offshore wind by 2035

6,000 MW of distributed solar by 2025

3,000 MW of energy storage by 2030

185 TBTU energy savings

100% clean carbon-free electricity by 2040, most aggressive in the nation
NYGATS History

Today’s Updates:

• Demonstration of Clean Energy Standard (CES) compliance – *Mark Gundrum*
• Value of Distributed Energy Resources (VDER) project RECs – *Jennifer Phelps*
• Renewable Energy Standard (RES) Tier 1 certification – *Marci Brunner*
• Environmental Disclosure Program (EDP) – *Peter Sheehan*
• CES Progress Reporting – *Marci Brunner*
• Community Choice Aggregation (CCA) renewable products – *Brad Tito*
CES Compliance Functionality
CES Compliance Module

- New module on the home page in LSE Accounts
- Shows running total of load for the RES and ZEC compliance periods
- Monitor RES and ZEC obligations and compliance activity

---

**LSE Tier 1 REC Preliminary Compliance Report**

<table>
<thead>
<tr>
<th>Compliance Year (January-December)</th>
<th>LSE Total Load (MWh) through January 2019</th>
<th>Tier 1 REC Obligation %</th>
<th>Tier 1 REC Obligation</th>
<th>Tier 1 RECs Banked</th>
<th>Tier 1 RECs Active</th>
<th>Tier 1 RECs EDP</th>
<th>Tier 1 REC Balance</th>
<th>ACP Price</th>
<th>Potential ACP Total Charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>4,009</td>
<td>0.780</td>
<td>31</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>$24.67</td>
<td>$784.77</td>
</tr>
<tr>
<td>2018 - Final</td>
<td>668,759</td>
<td>0.150</td>
<td>1,003</td>
<td>0</td>
<td>56</td>
<td>183</td>
<td>(520)</td>
<td>$18.71</td>
<td>$15,342.20</td>
</tr>
<tr>
<td>2017 - Final</td>
<td>703,770</td>
<td>0.035</td>
<td>246</td>
<td>0</td>
<td>0</td>
<td>246</td>
<td>0</td>
<td>$23.28</td>
<td>$0.00</td>
</tr>
</tbody>
</table>

Note: There is a 5-month lag between when the load occurs and when it is available to NYGATS. This lag is part of the NYISO settlement process. For example, the load data from January will be available in NYGATS in June.

---

**LSE ZEC Compliance Summary**

<table>
<thead>
<tr>
<th>Compliance Year (April-March)</th>
<th>LSE Total Load (MWh) through January 2019</th>
<th>LSE Load Share</th>
<th>LSE ZEC Obligation</th>
<th>ZECs</th>
<th>ZEC Balance</th>
<th>ZEC Price</th>
<th>ZEC Total Charge</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>0</td>
<td>0.00000%</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>$19.5900</td>
<td>$0.00 Calculated</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>496,133</td>
<td>0.37218%</td>
<td>98,397</td>
<td>0</td>
<td>(98,397)</td>
<td>$17.4800</td>
<td>$1,719.97956 Calculated</td>
<td></td>
</tr>
<tr>
<td>2017 - Final</td>
<td>705,761</td>
<td>0.45686%</td>
<td>126,679</td>
<td>126,679</td>
<td>0</td>
<td>$17.5394</td>
<td>$0.00 Snapshot</td>
<td></td>
</tr>
</tbody>
</table>

Note: There is a 5-month lag between when the load occurs and when it is available to NYGATS. This lag is part of the NYISO settlement process. For example, the load data from January will be available in NYGATS in June.
RES Retirement Reason

- LSE Accounts for EDP transfers
- Trackable field to identify RES retirements
LSE Compliance Reporting

- In LSE Accounts
- View summary of compliance activity
- Submit RES compliance filing
- Record of compliance activity is maintained
- Viewable by NYSERDA and DPS
**NYSERDA Tier 1 REC Sales**

- Interface in NYGATS for LSEs to order Tier 1 RECs from NYSERDA
- Functions in accordance with CES Final Phase 2 Implementation Plan

### Order Tier 1 RECs - 2019 Q1

<table>
<thead>
<tr>
<th>Compliance Year (January-December)</th>
<th>LSE Total Load (MWh) through January 2019</th>
<th>Tier 1 Obligation %</th>
<th>Tier 1 REC Obligation</th>
<th>Tier 1 RECs Banked</th>
<th>Tier 1 RECs Active</th>
<th>Tier 1 RECs EDP</th>
<th>Tier 1 REC Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>4,009</td>
<td>0.76%</td>
<td>31</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-31</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vintage Year</th>
<th>Right of First Refusal Tier 1 RECs Available</th>
<th>NYSERDA Tier 1 REC Price</th>
<th>Tier 1 REC Order Quantity</th>
<th>Order Cost</th>
<th>Allocated Tier 1 RECs</th>
<th>Actual Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>66</td>
<td>$17.01</td>
<td>0</td>
<td>$0.00</td>
<td>0</td>
<td>$0.00</td>
</tr>
<tr>
<td>2019</td>
<td>156</td>
<td>$22.43</td>
<td>0</td>
<td>$0.00</td>
<td>0</td>
<td>$0.00</td>
</tr>
</tbody>
</table>

**Order Status:** No order entered
NYGATS and the CES

- Available Non-NYSERDA Tier 1 RECs can be posted to the NYGATS Bulletin Board
- Publicly available for Buyers and Sellers

<table>
<thead>
<tr>
<th>Requestor</th>
<th>Contact</th>
<th>Phone</th>
<th>Email</th>
<th>Quantity</th>
<th>Price</th>
<th>Comments</th>
<th>Timestamp</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York Municipal Power Agency</td>
<td>Ron Potthoff</td>
<td>518-465-9313</td>
<td><a href="mailto:rpg@roadrandco.com">rpg@roadrandco.com</a></td>
<td>5000</td>
<td></td>
<td>Interested in procuring 5,000+ Vintage 2017-19 RECs, both Tier 1 eligible and otherwise.</td>
<td>2019-05-06 16:40:55Z</td>
</tr>
<tr>
<td>New York Power Authority</td>
<td>Thomas Doherty</td>
<td>914-287-7860</td>
<td><a href="mailto:thomas.doherty@nypa.gov">thomas.doherty@nypa.gov</a></td>
<td>160000</td>
<td></td>
<td>The New York Power Authority (NYPAA) invites you to submit a proposal for NYPAA’s voluntary purchase of Renewable Energy Credits (also known as Environmental Attributes) (Distribution RECs) derived from wind farms located in the State of New York, for resale and transfer to its customers. NYPAA is requesting bids for up to 160,000 MWh of RECs over the calendar-year 2018-2019 Vintage periods. Product types, quantities, and terms requested are shown in the RFP. All bids are posted separately on the Anbari platform. Participation requires registration and onboarding of the organization on Anbari. Please contact NYPAA for more information and assistance.</td>
<td>2019-05-13 19:41:46Z</td>
</tr>
<tr>
<td>NOCO Electric LLC</td>
<td>Joe DePrimo</td>
<td>719-614-1209</td>
<td><a href="mailto:jdeprimo@noco.com">jdeprimo@noco.com</a></td>
<td>500</td>
<td></td>
<td>NOCO looking to purchase 2018 Tier 1 RECS to meet RPS/125 compliance obligations.</td>
<td>2019-05-30 13:30:33Z</td>
</tr>
</tbody>
</table>
VDER Project Registration
VDER Project Registration

- New project type (VDR)
- Available in all account types
  - Interconnecting utility
  - Customers declining “E”
- Reduced number of registration fields to complete
- SIR # required
- Many fields set with default values (e.g. NERC Region = NPCC)
• New project type (ONS)
• Available in all account types
• As per 3/19/2017 PSC VDER Order
  • For onsite VDER projects where the utility has rights to the RECs from exported generation and the onsite owner desires the RECs from generation consumed on-site
VDER Project Registration – Onsite Owner

VDER Onsite is only for projects where RECs are split between the interconnecting LSE and the project owner

1. Interconnecting LSE registers VDER project, VDR project created in LSE Account
2. Review of VDR project registration, VDR project approved
3. ONS project created in project owner’s NYGATS Account
4. Interconnecting LSE loads meter data for exported generation from VDER project
5. Feasibility check 1 is run on VDR meter data
6. Passes feasibility, exported generation RECs issued in LSE’s NYGATS Account
7. Onsite owner loads meter data for onsite consumption from VDER project
8. Feasibility check 2 is run on (VDR meter data) + (ONS meter data)
9. Passes feasibility, onsite consumption RECs issued in onsite owner’s NYGATS Account
In LSE Accounts Only

- Tier 1 application integrated into project registration
- Project registration and Tier 1 certification a one-step process
- Validated using DPS Public SIR Inventory Reporting
RES Tier 1 Certification
RES Tier 1 Eligibility – Certification Process

- NYGATS is the platform for generators to apply for eligibility and for NYSERDA and DPS review and determination.
- For Operational Projects, if approved, eligible percentage of certificates get Tier 1 flag:
  - Tier 1 eligibility is indicated on RECs issued after approval of Tier 1 application.
- Provisional Certification -- non-operational projects - pre-requisite for participation in RES Procurements.
- Public reports available on RES Tier 1 Operational and Provisional Certification.
# NYGATS Public Reports

## Operational Eligibility

<table>
<thead>
<tr>
<th>Account Holder Company Name</th>
<th>NYGATS ID</th>
<th>Project Name</th>
<th>City / State</th>
<th>Control Area Operator</th>
<th>Fuel Type</th>
<th>Vintage Type</th>
<th>Nameplate Capacity</th>
<th>Eligibility</th>
<th>Initial Vintage</th>
<th>Application Status</th>
<th>Date Submitted</th>
<th>Date of NYSDOE ruling</th>
</tr>
</thead>
<tbody>
<tr>
<td>GreenLogic LLC</td>
<td>GZN33746</td>
<td>Deer Park F.I.T. - PC Richard &amp; Son Long Island Corp</td>
<td>Deer Park, NY</td>
<td>NyISO</td>
<td>Solar</td>
<td>New</td>
<td>0.315</td>
<td>Tier 1</td>
<td>01/2017</td>
<td>Approved</td>
<td>04/06/2017</td>
<td>04/10/2017</td>
</tr>
<tr>
<td>GreenLogic LLC</td>
<td>GZN33757</td>
<td>Fresh Line Technologies, INC. - Fresh Line Technologies, INC.</td>
<td>Hauppauge, NY</td>
<td>NyISO</td>
<td>Solar</td>
<td>New</td>
<td>0.315</td>
<td>Tier 1</td>
<td>01/2017</td>
<td>Approved</td>
<td>04/06/2017</td>
<td>04/10/2017</td>
</tr>
</tbody>
</table>

## Provisional Eligibility

<table>
<thead>
<tr>
<th>Control Area Operator</th>
<th>Fuel Type</th>
<th>V... Typ</th>
<th>Eligibility</th>
<th>Count of Projects</th>
<th>Nameplate Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>NYISO</td>
<td>Adulterated Biomass - Renewable</td>
<td>New</td>
<td>Tier 1</td>
<td>1</td>
<td>21</td>
</tr>
<tr>
<td>NYISO</td>
<td>Biogas - Anaerobic Digestion</td>
<td>New</td>
<td>Tier 1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>PJM</td>
<td>Biogas - Landfill Gas</td>
<td>New</td>
<td>Tier 1</td>
<td>3</td>
<td>10.525</td>
</tr>
<tr>
<td>NYISO</td>
<td>Fuel Cells - Non-Renewable</td>
<td>New</td>
<td>Tier 1</td>
<td>3</td>
<td>15.24</td>
</tr>
<tr>
<td>NYISO</td>
<td>Hydroelectric</td>
<td>Existing</td>
<td>Tier 1</td>
<td>2</td>
<td>13.6</td>
</tr>
<tr>
<td>NYISO</td>
<td>Solar</td>
<td>New</td>
<td>Tier 1</td>
<td>279</td>
<td>12633.97</td>
</tr>
</tbody>
</table>
Quick Stats on Certification

NYSERDA has 30 days to either grant or deny a PSoQ or SoQ.

Average time to determination = 4 days

340 Provisionally Certified Projects
200 Operationally Certified Projects

Review the Eligibility Guidelines prior to submitting an Operational or Provisional Certification application

Environmental Disclosure (EDP)
Updates and Mechanics

• All RECs must be in the EDP subaccount by June 30 to be included in the EDP label
  • This includes any Tier 1 RECs transferred for RES compliance

• Only bundled (attributes + energy) RECs are included in EDP
  • Nationally-sourced REC-only imports are **not** included in the label
  • EDP eligibility can be confirmed on the REC Transfer Acceptance screen

• Final LSE load numbers for the calendar year are available from the NYISO in May
  • Available in NYGATS by May 15

• LSEs have between May 15 and June 30 to ensure they have sufficient RECs within the EDP subaccount to backup renewable claims

• Non-Tier 1 RECs purchased by NYSERDA under the former RPS program are allocated to eligible LSE EDP subaccounts at settlement, prior to label creation
Understanding and calculating values contained in EDP label

- Get the total load figure from the “EDP Label” report within NYGATS (this is within the “Account Holder” reports in LSE Accounts)
- Run the “Import and System Mix Emissions” report from the Public reports section and note the pollutant emission values (lbs/MWh) from Residual Mix Type within the NYISO Control Area
- Multiply the lbs/MWh x Non-Renewable Certificates value – from the EDP Label report and divide by Total Load. Values will match label.

EDP labels located at:
CES Progress Reporting
CES Annual Progress Report: 2017 Compliance Year

- Published February 2019
- NYGATS data used throughout
NYGATS data in 2017 Report

Table 2. New York System Mix Renewable Energy by Technology
Source: NYGATS

<table>
<thead>
<tr>
<th>Fuel Type</th>
<th>2014 MWhs</th>
<th>2017 MWhs</th>
<th>MWh change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biomass</td>
<td>609,253</td>
<td>561,816</td>
<td>-47,477</td>
</tr>
<tr>
<td>Hydroelectric</td>
<td>35,834,762</td>
<td>37,956,674</td>
<td>2,160,812</td>
</tr>
<tr>
<td>Renewable Biogas</td>
<td>394,314</td>
<td>236,970</td>
<td>-157,344</td>
</tr>
<tr>
<td>Solar</td>
<td>681,610</td>
<td>1,045,469</td>
<td>363,859</td>
</tr>
<tr>
<td>Wind</td>
<td>3,775,684</td>
<td>3,242,868</td>
<td>-532,816</td>
</tr>
<tr>
<td>Total</td>
<td>41,295,663</td>
<td>43,082,717</td>
<td>1,787,054</td>
</tr>
</tbody>
</table>

Figure 4. New York System Mix, 2017
Source: NYGATS

Table 8. Voluntary Activity in NYGATS
Source: NYGATS

<table>
<thead>
<tr>
<th>2017 REC's</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Voluntary Activity in LSE EDP Subaccounts</td>
<td>4,019,475</td>
</tr>
<tr>
<td>Corporate or Individual Retirements</td>
<td>168,279</td>
</tr>
<tr>
<td>Customer-sited DER Retirements</td>
<td>1,114,207</td>
</tr>
<tr>
<td>Non-Tier 1 REC's Banked</td>
<td>2,601,399</td>
</tr>
</tbody>
</table>
NYGATS Public Reports

- Certificate Statistics – updated in real-time
- Import and System Fuel Mixes - updated at settlement
- APX working on enhancements to public reports for more transparency in CES Progress Reporting
CCA Renewable Products
CCA Retirement Reason

- In NYGATS LSE Accounts for EDP transfers
- Trackable field to identify CCA retirements by jurisdiction

EDP Subaccount
- Select a EDP subaccount 2018
- Utility Green Pricing Product:
  - Certification: Select a Certification
  - Additional Details:
- Competitive Green Power Product:
  - Certification: Select a Certification
  - Additional Details:
- RES Compliance:
  - Additional Details:
- Community Choice Aggregation:
  - Certification: Select a Certification
  - Municipality: Name of the CCA jurisdiction (e.g., Town of [Name] or City of [Name]). RECs may be attributed to one local government only.
- Other:
  - Certification: Select a Certification
  - Additional Details:
NYSERDA’s Clean Energy Communities Program

High Impact Actions
1. Benchmarking
2. Clean Energy Upgrades
3. LED Street Lights
4. Clean Fleets
5. Solarize
6. Unified Solar Permit
7. Energy Code Enforcement Training
8. Climate Smart Communities Certification
9. **Community Choice Aggregation**
10. Energize NY Finance

272
Clean Energy Communities

552
Participating Communities

1,573
High-Impact Actions Completed
CEC Requirements for the CCA Action

To earn credit for the CCA action under NYSERDA’s Clean Energy Communities (CEC) Program, the municipality must submit the following documentation:

• The adopted legislation authorizing the municipality’s participation in an opt-out CCA program.

• An executed electric service agreement between the applying jurisdiction and an Energy Services Company (ESCO) to supply electricity to participating customers on an opt-out basis that is a default 100% renewable clean energy product mix.

  • The agreement should provide that the ESCO will retire RECs on behalf of the Municipality in a NYGATS Account (with reports on such retirements to the Municipality) in a manner that is compliant with rules of the Environmental Disclosure Program.

  • The electrical energy associated with the RECs must be consumed at retail in New York State.
Questions?
2018 Settlement Timeline
2018 NYGATS Settlement

- December 2019: NYISO load data available
- 2018 Generation data reporting ends
- 2018 Certificate trading closes
- 2018 ACP Invoice period
- March 2019: NYISO load data available
- ZEC Preliminary compliance report available
- ZEC Reconciliation Period
- ZEC Final compliance report available
- Settlement occurs

5/1/2019: RES Preliminary 2018 compliance available
6/1/2019
7/1/2019: RES Final compliance report available
8/1/2019
9/1/2019
10/1/2019
11/1/2019:

Settlement:
- Residual Mix is created
- System Mix is created
- EDP labels are created
Registry Administration Updates
NYGATS Help Knowledge base
Certificate Imports and Exports

Facilitating Bundled and Unbundled Transactions
- Bundled = a transaction of Energy and Attributes; requires the schedule and physical flow of energy into (or out of) New York Control Area
- Unbundled = a transaction of Attributes only (aka “Certificate-Only” transaction)

Current Direct Linkage
- PJM – Bundled and Unbundled imports into NYGATS only
- Export function provided, but not linked to PJM-GATS
- NAR – Bundled and Unbundled imports into NYGATS; Unbundled exports
- GIS – Bundled exports out of NYGATS

Improvements/Growth of Connectivity
- GIS – Automation of bundled and unbundled imports into NYGATS
- PJM – Bundled and Unbundled exports out of NYGATS
- Continued growth in the voluntary markets will drive additional linkage to other registries for unbundled transactions
Questions?
Thank you!

https://www.nyserda.ny.gov/NYGATS

Marci Brunner
Marci.Brunner@nyserda.ny.gov
518-862-1090, x3415

Mark Gundrum
Mark.Gundrum@nyserda.ny.gov
518-862-1090, x3256

Maureen Leddy
Maureen.Leddy@nyserda.ny.gov
518-862-1090, x3318

Jennifer Phelps
Jennifer.Phelps@nyserda.ny.gov
518-862-1090, x3569

Peter Sheehan
NYS Dept. of Public Service, Office of Clean Energy
Peter.Sheehan@dps.ny.gov
518-473-9891

Bradford Tito
Bradford.Tito@nyserda.ny.gov
518-862-1090, x3545

Devon Walton
NYGATS Registry Administrator, APX Inc.
nygats@apx.com
408-517-2139