Repowering and the Clean Energy Standard

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Phase 1 Implementation Plan Proposal – Tier 1 Eligibility
Phase 1 Implementation Plan Proposal

• Proposal filed jointly by New York State Department of Public Service and NYSERDA on October 31, 2016

• Proposed details and processes regarding:
  – RES Eligibility – Eligibility for repowered facilities is the subject of today’s technical conference
  – Certification
  – Long Term Procurement for RECs (Process and Evaluation Criteria)
  – LSE Demonstration of Compliance
  – Reporting Requirements
Phase 1 Implementation Plan Proposal – Vintage Generation Facilities

- New generators that comply with the technologies listed in Appendix A of the CES Order will be eligible for Tier 1 of the RES program if the first date of commercial operation of the generation facility occurs on or after January 1, 2015 (the “Threshold Eligibility Date” or “TED”).

- All or a portion of the energy production from eligible generation sources with first date of commercial operation prior to January 1, 2015 (“Vintage Generation Facility” or “VGF”) will be eligible under certain conditions.
Phase 1 Implementation Plan Proposal – Upgrades

- The historic generation baseline of an upgraded generation facility will be measured as the average annual electrical production from the generation facility in MWhs, for the three (3) calendar years prior to the TED, 2012 to 2014, or for the first 36 months after the commercial operation date if that date is after January 1, 2012.

- The incremental generation from an upgraded VGF will be considered eligible for Tier 1 if the proposer can:
  - Demonstrate that a material capital investment in equipment or facilities has been made to the generation facility on or after January 1, 2015
  - Demonstrate that such investment directly results in a material increase in the efficiency of its generation process, resulting in an increase in annual energy production of at least five percent (5%) under normal operating conditions and normal resource availability, relative to the weather-normalized annual energy production prior to the upgrade.
Phase 1 Implementation Plan Proposal – Return to Service

• The entire output of a generating facility that does not meet the Threshold Eligibility Date (TED) requirements, can qualify as a Return to Service generation unit and be eligible for Tier 1 if the generation facility can demonstrate to NYSERDA that it has not been in commercial operation for at least 48 consecutive months prior to the return to service date upon submission of the certification application.
Phase 1 Implementation Plan Proposal – Repowering

- The entire generation from a repowered vintage generator (“Repowered Facility”) will be considered eligible for Tier 1 if it can demonstrate that:
  - The Prime Mover, has operated for the length of its Useful Life; and
  - The existing facility’s Prime Mover has been completely replaced with a new one, which has been manufactured and installed on or after January 1, 2015; and
  - Such replacement of the Prime Mover, has directly resulted in a material (15 percent (15%) or more) increase in the efficiency of the production of the generation unit; and
  - The Repowered Facility is operating at the site of an existing VGF; and
  - 80 percent (80%) of the tax basis per Generally Accepted Accounting Principles (GAAP) from the completed Repowered Facility (not including its property and tangible assets) is derived from capital expenditures made on or after January 1, 2015.
# Phase 1 Implementation Plan Proposal – Repowering

## Prime Mover Definition

<table>
<thead>
<tr>
<th>Energy Source</th>
<th>Definition of Prime Mover for Energy Source</th>
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<tbody>
<tr>
<td>Landfill Gas</td>
<td>The entire internal combustion engine or combustion turbine.</td>
</tr>
<tr>
<td>Biomass</td>
<td>The entire boiler.</td>
</tr>
<tr>
<td>Wind</td>
<td>The entire wind turbine, including the generator, gearbox (if any), nacelle, rotor and blades.</td>
</tr>
<tr>
<td>Hydroelectric</td>
<td>The entire turbine and structures supporting the turbine, not necessarily including the building housing the turbine.</td>
</tr>
<tr>
<td>Solar PV</td>
<td>The modules and inverters.</td>
</tr>
<tr>
<td>Digester gas</td>
<td>The entire digester unit and internal combustion engine or combustion turbine as applicable.</td>
</tr>
</tbody>
</table>
Phase 1 Implementation Plan Proposal – Repowering

Useful Life by Energy Source

<table>
<thead>
<tr>
<th>Energy Source</th>
<th>Useful Life (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anaerobic Digestion</td>
<td>20</td>
</tr>
<tr>
<td>Biomass/Liquid Biofuel</td>
<td>20</td>
</tr>
<tr>
<td>Fuel Cell</td>
<td>20</td>
</tr>
<tr>
<td>Hydroelectric</td>
<td>50</td>
</tr>
<tr>
<td>Landfill Gas</td>
<td>15</td>
</tr>
<tr>
<td>Solar PV</td>
<td>20</td>
</tr>
<tr>
<td>Wind</td>
<td>20</td>
</tr>
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</table>
Phase 1 Implementation Plan Proposal – Relocated Facilities

- A generation facility meeting the following definition of a relocated Tier 1 generation facility (“Relocated Facility”) will be considered eligible for Tier 1 if it can demonstrate that it meets all other eligibility requirements. A generation facility whose Prime Mover (per Table 1, above) was used on or before the TED to generate electrical energy outside of both the New York Independent System Operator (NYISO) Control Area and Control Areas adjacent thereto, and that is relocated into one of said Control Areas after the TED.
Final Phase 1 Implementation Plan
Final Phase 1 Implementation Plan

• 20 parties submitted comments on Phase 1 Implementation Plan Proposal

• Public Service Commission Order Approving Phase 1 Implementation Plan issued on February 22, 2017

• Final Phase 1 Implementation Plan filed jointly by New York State Department of Public Service and NYSERDA on March 24, 2017 in conformance with the Commission Order
Final Phase 1 Implementation Plan - Key Changes versus Proposal

• NYSERDA will be required to consider a longer 10 year baseline period, which allows hydroelectric facilities to more effectively demonstrate the normal operating conditions of the facility, under normal resource availability, relative to the weather-normalized annual production.

• Upgrades to specific units within a larger facility are allowed, however, the minimum 5 percent threshold criteria for demonstrating increased production will remain.

• The incremental production that is deemed eligible for Tier 1 RECs need not wait until an annual period has passed to be measured against the historic production for owners to begin receiving Tier 1 REC payments.
Final Phase 1 Implementation Plan - Key Changes versus Proposal

• The Commission will not allow repowered facilities to be eligible for Tier 1 at this time.

• Within 180 days of the issuance of the Order, Staff is directed to file a report to the Commission which includes recommendations for:
  – the cost effective retention of baseline resources;
  – eligibility for repowered facilities; and
  – the potential for expanding Tier 2 eligibility.
Roundtable Discussion