



New York State Clean Energy Standard RES Tier 1 Certification Submission Instructions and Eligibility Guidelines

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Advance innovative energy solutions in ways that improve New York's economy and environment.

Vision Statement:

Serve as a catalyst – advancing energy innovation, technology, and investment; transforming New York's economy; and empowering people to choose clean and efficient energy as part of their everyday lives.

NYSERDA Record of Revision

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New York State Clean Energy Standard RES Tier 1 Certification

Submission Instructions and Eligibility Guidelines

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Table of Contents

- NYSERDA Record of Revision..... i**
- 1 Overview 1**
 - 1.1 Projects Eligible under the Renewable Portfolio Standard Main Tier1
- 2 Interface Within NYGATS..... 2**
 - 2.1 Creating a Provisional Statement of Qualification—Non-Operational Projects.....2
 - 2.2 Creating a Statement of Qualification Submission—Operating Projects2
 - 2.3 Communications Through NYGATS3
- 3 Documentation 4**
 - 3.1 Criteria for RES Eligibility4
- 4 Distributed Energy Resources 5**
- 5 Interconnection, Geographic Eligibility, and Delivery Requirements..... 7**
 - 5.1 Projects Located Within NYISO7
 - 5.2 Importing Projects7
- 6 Technology Types 9**
 - 6.1 Biomass11
 - 6.2 Fuel Cells11
 - 6.3 Hydroelectric.....11
 - 6.4 Tidal/Ocean.....12
 - 6.5 Solar and Wind.....12
- 7 Vintage 13**
 - 7.1 In-Service Date13
 - 7.2 Demonstration of Commercial Operation13
 - 7.3 Incremental Upgrades14
 - 7.3.1 Requirements for Non - Intermittent Resources..... 14
 - 7.3.1.1 Biomass/Biogas Upgrades..... 15
 - 7.3.2 Requirements for Intermittent Resources..... 16
 - 7.3.2.1 Hydroelectric Upgrades 16
 - 7.3.2.2 Wind Upgrades 18
 - 7.3.2.3 Solar Upgrades..... 18
 - 7.4 Return to Service Project19
 - 7.5 Relocated Project.....19
- 8 Aggregated Projects 20**
 - 8.1 Registering Aggregations in NYGATS20
 - 8.2 Provisional Aggregations20
- 9 Attestations 21**
- 10 Next Steps..... 22**

10.1	Submission Review	22
10.2	Issuance of PSoQ or SoQ.....	22
10.3	Ongoing Requirements, Revocation or Suspension	22
10.4	NYSERDA Right to Verify Information and Revoke or Suspend SoQ	23
Appendix A: Eligibility Requirements for Biomass Projects.....		1
A.1.1.1	Landfill Gas Produced On-Site	1
A.1.1.2	Anaerobic Digestion	1
A.1.1.3	Renewable Pipeline Gas (Biogas Transported to the Site via Pipeline).....	2
A.1.3.1	Agricultural Woody Biomass	3
A.1.3.2	Forest Biomass.....	3
A.1.3.3	Clean Wood Residues	4
A.1.3.4	Clean Urban Waste Wood	4
A.1.4.1	Mixed Urban Biomass Residues	6
Endnotes		1

1 Overview

This document describes the resource eligibility determination process under Tier 1 of the Renewable Energy Standard (RES) component of New York’s Clean Energy Standard (CES).

To be eligible to participate in Tier 1 of the RES, an applicant must submit a request for a resource eligibility determination and demonstrate that the project meets RES eligibility requirements. Projects that demonstrate eligibility will be granted a Statement of Qualification (SoQ). The SoQ entitles all eligible New York Generation Attribute Tracking System (NYGATS) Renewable Energy Certificates (RECs) created by the project to be used for Tier 1 RES compliance by load serving entities (LSEs).

Projects must be operational to receive an SoQ. Applicants whose projects have not yet become operational can submit a resource eligibility determination request for provisional status, and if successful will be granted a Provisional Statement of Qualification (PSoQ). Projects with either an PSoQ or a SoQ will be eligible to participate in NYSERDA’s long-term annual solicitations for Tier 1 RECs.

For more information on the RES, please refer to:

- NY Public Service Commission Order Adopting a Clean Energy Standard, August 1, 2016 (CES Order)
 - See Appendix A of the CES Order for eligible technologies
- Clean Energy Standard Phase I, II, III Implementation Plan Proposal and Final Implementation Plans

Orders and reports are available on NYSERDA’s Clean Energy Standard webpage.¹

1.1 Projects Eligible under the Renewable Portfolio Standard Main Tier

Operating projects previously certified and delivered under the Main Tier Renewable Portfolio Standard that are also eligible for Tier 1 of the RES need not resubmit for a resource eligibility determination. Such projects will be identified by NYSERDA and noted as qualified for Tier 1 of the RES in their NYGATS account. Projects under development previously certified under the Main Tier Renewable Portfolio Standard that are also eligible for Tier 1 of the RES will not need to submit a request for a PSoQ but will need to submit a request for a SoQ after operation commencement. It is important to note that to be RES Tier 1 eligible the project must have commenced operation on or after January 1, 2015, unless the project qualifies as a Vintage Generation Facility (VGF) (Project) (See Section 7).

2 Interface Within NYGATS

All submissions for a resource eligibility determination will be completed in NYGATS. Submissions will be accepted on a continuous basis for either a PSoQ or a SoQ. The first step for achieving either qualification is to register the project in NYGATS. For more information or to start the registration process, visit the NYGATS page on NYSERDA's website.²

2.1 Creating a Provisional Statement of Qualification—Non-Operational Projects

A PSoQ will be granted to non-operational projects meeting the specified requirements. Such certifications affirm that the project would meet the eligibility criteria for Tier 1 RES certification and participation in a NYSERDA solicitation for RES Tier 1 long-term contracts if it is installed or constructed in a manner consistent with the information submitted in the submission and the RES Tier 1 requirements for operational projects. Once the facility is operational, the applicant must return to NYGATS to complete a NYGATS Registration and, subsequently, the Statement of Qualification Application associated with operating projects, including, but not limited to, demonstration of Commercial Operation and any additional information that may be required to confirm the facility was constructed as Provisionally Certified or that the facility otherwise Tier 1 eligible.

Projects that are not yet operational will not be able to complete a full NYGATS registration, but they will be able to complete a submission for a PSoQ in NYGATS. The provisional submission form will follow the same format as the SoQ submission, though some fields required for operating projects will not be required of provisional submissions. The information entered in the submission will be held in NYGATS, so that when the project becomes operational, the applicant may return to NYGATS to complete a SoQ submission, and may start the SoQ application with the information provided in the PSoQ. The applicant may then update project information that may have changed, and if eligible, will be granted an SoQ. The applicant must provide an explanation or progress report for any missing information requested.

2.2 Creating a Statement of Qualification Submission—Operating Projects

Once a project is registered in NYGATS, the applicant may return to NYGATS at any time to complete the request for a Tier 1 RES SoQ determination. The data fields required for certification will be³ incremental to information submitted in the NYGATS registration process, and any information entered during registration will carry over to the certification submission.

Operating projects that have implemented or plan to implement incremental upgrades will need to register the upgrade investment as a distinct project from the original project. The portion of the project included in the registration for an incremental upgrade should reflect the increased project generation resulting from the project post-upgrade and the total capacity of the project post-upgrade.

If a project that has multiple generating units⁴ aggregating to a single PTID⁵ applies for eligibility using the meter data reported for that PTID, then the engineering report must include all data for all generating units. Tier 1 RECs will only be issued for the portion of generation deemed eligible.

If a project that has multiple generating units aggregating to a single PTID applies for eligibility for an individual project and provides an engineering report that does not include all the projects reporting under that PTID, then the applicant will be required to 1) separately register all projects aggregating to the PTID in NYGATS; and 2) have all meter data reported by a Qualified Independent Party per the meter data loading requirements set out in the NYGATS Operating Rules in order to have the SoQ submission approved. Certificate creation will occur for the individual projects and Tier 1 RECs will be issued for portion of generation deemed eligible.

All fields contained in the SoQ submission are required for NYSERDA to grant an SoQ. If the documentation requested is not available, the applicant should upload a progress report toward securing the required document, or an explanation for why the project does not have it.

For more information on using NYGATS or to submit a PSoQ or SoQ request, please visit the NYGATS page on NYSERDA's website.⁶

2.3 Communications Through NYGATS

When creating a NYGATS Standard Registration, the applicant must designate one or more contact(s). The contact(s) designated will receive all RES certification-related communications, including clarifying questions, notifications of submission status, PSoQ or SoQ issuance or denial, notice of suspension or revocation, NYGATS system updates, and NYSERDA program announcements.

3 Documentation

3.1 Criteria for RES Eligibility

Each applicant is required to submit materials sufficient to demonstrate its fulfillment of all RES program eligibility requirements. Information submitted in NYGATS registration necessary for certification includes the following:

- Contact information
- Unit name and NYGATS identification number
- Nameplate capacity
- Fuel type
- In-service date
- Control area
- Street address and navigational coordinates
- Whether the project is submitting a request as part of an aggregation
- Uploaded documentation to support eligibility claims
- If a project is seeking certification as a VGF, additional information as required

4 Distributed Energy Resources

The eligibility of distributed energy resources (DER) under Tier 1 of the RES was determined by a Public Service Commission Order issued on March 9, 2017 in Case 15-E-0082, Policies, Requirements, and Conditions for Implementing a Community Net Metering Program.⁷

In accordance with the order:

1. Behind-the-meter projects will only be eligible to create NYGATS Tier 1 RECs or to bid in RES Tier 1 solicitations conducted by NYSERDA if they meet the following requirements:
 - a. Completes Step 8 (for projects greater than 50kW) or Step 4 (for projects less than or equal to 50kW) of the Standardized Interconnection Requirements by March 9, 2017
 - b. Provides written notice of such completion to the interconnecting utility, by March 17, 2017
 - c. Enrolls in NEM under the pre-existing NEM tariffs
 - d. Have not received incentive funding from any State or local program
 - e. Project meets the RES resource eligibility and vintage requirements.
2. Projects that meet all requirements and are successful in securing an award through a RES solicitation by NYSERDA will receive Tier 1 NYGATS RECs for performance under the RES Agreement with NYSERDA. All other projects will be eligible to receive non-tradable, non-Tier 1 eligible RECs only.
3. DER projects that enroll in VDER Phase One NEM are ineligible to bid in RES Tier 1 solicitations conducted by NYSERDA. Under VDER Phase 1 NEM, NYGATS RECs associated with generation from community distributed generation (CDG) projects are granted by default to the interconnecting LSE unless the customers jointly elect to retain the RECs from the project. For CDG projects that fall into this default scenario, the interconnecting LSE must submit a request for Tier 1 certification and if deemed eligible the project will create Tier 1 RECs for the portion of the generation that is exported to the grid. These Tier 1 RECs can only be used to satisfy the utility's RES Tier 1 compliance requirements. Projects that elect to retain the NYGATS RECs will be eligible to receive non-tradable, non-Tier 1 eligible RECs only.
4. DER projects that enroll in VDER Phase 1 Value Stack compensation are ineligible to bid in RES Tier 1 solicitations conducted by NYSERDA. Under the VDER Phase 1 Value Stack, the RECs from all projects are granted by default to the interconnecting LSE unless the customer elects to retain the NYGATS RECs from the project. For projects that fall into this default scenario, the interconnecting LSE must submit a request for Tier 1 certification and if deemed eligible the project will create Tier 1 RECs for the portion of the generation that is exported to the grid. These Tier 1 RECs can only be used to satisfy the utility's RES Tier 1 compliance requirements. Projects that elect to retain the RECs will be eligible to receive non-tradable, non-Tier 1 eligible RECs only.

Table 1. Summary of Distributed Energy Resource Categories and Treatment of Generation Attributes

		DER Category	Options	Is the project allowed to bid into RES Tier 1 Solicitations conducted by NYSEERDA if otherwise eligible?	Will NYGATS create a transferable Certificate in the account of the generator?	Will NYGATS create a non-transferable Certificate in the account of the customer (indicates retirement by customer)?	Do the attributes of the generation count towards the interconnecting LSE's RES Compliance Mandate?	Do the attributes of the generation count towards the Statewide 50% by 2030 renewable resources goal?
Pre-existing NEM Tariffs	Net Energy Metering	All Projects (Prior to Cut-Off)	RES Tier 1 (if eligible and awarded a contract by NYSEERDA)*	Yes	Yes**	No	No	Yes
			Customer Retention	No	No	Yes	No	Yes
VDER Phase One Tariffs	Phase One NEM	On Site Mass Market Projects and Small Wind Remote Net Metering Projects On-Site Large Projects	None	No	No	Yes	No	Yes
		Community Distributed Generation Projects	Interconnecting-LSE-Option Customer-Retention Option	No No	No No	No Yes	Yes No	Yes Yes
	Value Stack	On-Site Mass Market Projects and Small Wind (by opt-on, no longer net metering) Community Distributed Generation Projects (no longer net metering) Remote Customer Projects(no longer net metering) On-Site Large Projects (no longer net metering)	Interconnecting-LSE-Option Customer-Retention Option	No No	No No	No Yes	Yes No	Yes Yes

Adapted from DFS Order on the Value of Distributed Energy Resources, Appendix B

* All pre-existing NEM projects that are eligible to bid into RES Tier 1 solicitations are subject to a previous RPS Main Tier contract rule that prohibited simultaneous collections of both New York RPS incentive payments and production-based incentives from any other state or local source, including CST, NY-Sun, and CEF program incentives.

** The Certificates will be transferable to NYSEERDA pursuant to contract who may then transfer them to Load Serving Entities.

5 Interconnection, Geographic Eligibility, and Delivery Requirements

In addition to the possession of an SoQ, to be eligible to create Tier 1 RECs in NYGATS, a project must demonstrate the supply of energy into a market administered by the New York Independent System Operator (NYISO). Specific delivery requirements were included in the Implementation Plan Proposals and Final Implementation Plans.⁸

Regardless of the physical location of the project, any electricity associated with Tier 1 RES-eligible RECs must not be exported to another control area once delivered within NYISO. Applicants will need to attest to their understanding of this requirement in the submission.

5.1 Projects Located Within NYISO

The applicant must provide information regarding the distribution utility to which the project is connected, as well as the tariff type used to meter the contracted delivery. The tariff type options are as follows:

- Wholesale – NYISO
- Distribution Utility – Energy and Capacity

The user must select one of the following Generation Meter Types:

- Utility Controlled Wholesale Meter
- Facility Controlled Revenue Grade Meter
- Distribution Utility – Net Energy Metering
- Distribution Utility - Value of DER Phase 1

5.2 Importing Projects

The electricity associated with the RECs used for compliance from RES resources located in a control area adjacent to the NYISO must be scheduled, transmitted, delivered, and settled in the NYISO energy market in each hour, and be accompanied with documentation of a unit-specific contract path between the injection point in the control area of origin to the delivery point in New York that includes the provision of transmission or transmission rights for delivering the generation via the NYISO using the North American Electric Reliability Corporation (NERC) tag fields Sending and Receiving Control Areas (CA) and Purchasing/Selling Entity (PSE) Name and Number. For imported RECs to be flagged as eligible towards Tier 1 compliance obligations, projects located in an adjacent control area will need to continuously demonstrate the delivery of energy and RECs into New York State through the requirements laid out in the Phase I Implementation Plan Proposal and Final Implementation Plan linked above (see ongoing requirements in Section 10.3). Tier 1 eligible energy scheduled and delivered from external control areas must be accompanied by the NERC tag information from the OATI (Open Access Technology International) System indicating the importing project as the source for the scheduled and transmitted electricity into the NYISO. NERC tag information must be emailed to res@nyscrda.ny.gov directly from OATI. NYSERDA will

use the information from OATI to ensure that the requirements set forth in the Final Phase 1 Implementation Plan have been satisfied.

6 Technology Types

Certification under the RES is limited to the list of eligible resources as outlined by the CES Order, Appendix A. This list is provided in Table 2. The requirements and documentation needs vary by eligible technology.

Table 2. RES Eligible Electric Generation Sources

RES Eligible Electric Generation Sources	Source	Other Requirements
Biogas	Landfill Gas (Methane) Reciprocating/Internal Combustion Engine	Only electricity generated from eligible fuel is eligible.
	Sewage Gas (Methane) Reciprocating/Internal Combustion Engine	
	Manure Digestion (Methane) Reciprocating/Internal Combustion Engine	If required to have a SPDES permit by NYSDEC regulations, a Concentrated Animal Feeding Operation (CAFO) providing the manure must have and comply with its current Agricultural Waste Management Plan (AWMP) developed by a duly qualified Agricultural Environmental Management (AEM) Planner and must be operating in compliance with any applicable SPDES permit. If not required to have a SPDES permit, the CAFO must be operating in compliance with the best management practices for a project of its size set forth in the Principles and Water Quality Protection Standards specified in the AEM Framework and Resources Guide developed by the NYS Department of Agriculture and Markets and the NYS Soil and Water Conservation Committee.
	Anaerobic Digestion (other biogas digestion using agricultural or food processing residues and by-products)	
	Biomass* Thermochemical Gasification (syngas)	
	Biogas (from eligible sources of biomass* feedstock) Combined Heat and Power	
	Biogas (from eligible sources of biomass* feedstock) Co-fired with existing fossil-fuel Combustion	Only the electricity generated from the eligible biomass portion of the fuel is eligible.

Table 2 continued

RES Eligible Electric Generation Sources	Source	Other Requirements
Biomass* (continued)	Biomass Direct Combustion	
	Biomass Combined Heat and Power	
	Biomass Co-fired with existing fossil-fuel combustion	Only the electricity generated from the biomass portion of the fuel is eligible.
Liquid Biofuel	Biomass* Liquefaction through acid or enzymatic hydrolysis (Ethanol)	
	Biomass* Esterification (Biodiesel, Methanol)	
	Biomass* Thermochemical Pyrolysis (Bio-oil)	
	Biomass* Hydrothermal Liquefaction	
	Liquid Biofuel (from eligible sources of biomass* feedstock) Combined Heat and Power	
	Liquid Biofuel (from eligible sources of biomass* feedstock) Co-fired with existing fossil-fuel Combustion	Only the electricity generated from the biomass portion of the fuel is eligible.
Fuel Cells	Solid Oxide Fuel Cells (SOFC)	
	Molten Carbonate Fuel Cells (MCFC)	
	Proton Exchange Membrane Cells (PEM)	
	Phosphoric Acid Fuel Cells (PAFC)	
Hydroelectric	Hydroelectric Upgrades	No new storage impoundment, eligibility limited to the incremental production associated with the upgrade.
	Low-Impact Run-of-River Hydroelectric	No new storage impoundment.
Solar	Photovoltaics	
Tidal/Ocean	Tidal (Turbine and other rotary motion drives) electrical generators	
	Ocean Wave (Turbines and other rotary motion drives)	

Table 2 continued

RES Eligible Electric Generation Sources	Source	Other Requirements
Tidal/Ocean (cont.)	Ocean Current (Turbines and other rotary motion drives)	
	Ocean Thermal Pumped Storage Hydro Powered by Tidal	
Wind	Wind Turbines	

* All biomass sources must meet the eligibility criteria provided in Appendix A of the CES Order.

6.1 Biomass

Biomass projects must meet specified criteria pertaining to the specific feedstocks and conversion technologies used. Please see Appendix A for the full requirements for biomass projects.

6.2 Fuel Cells

Fuel cells using either renewable or nonrenewable fuels may be certified for Tier 1 of the RES if they meet all other requirements. Eligible types of fuel cells include Solid Oxide, Molten Carbonate, Proton Exchange Membrane, and Phosphoric Acid.

6.3 Hydroelectric

Qualifying hydroelectric resources are new low-impact, run-of-river or incremental upgrades.

The production associated with a new hydroelectric project must meet the following criteria: run-of-river operation, and no new storage impoundments.

For provisional status, the applicant must attach a report, prepared by an independent professional engineer, verifying that the design meets the eligibility criteria. Requirements for hydroelectric incremental upgrades are described in Section 7.3.

6.4 Tidal/Ocean

Projects utilizing tidal, ocean wave, ocean current wave, ocean thermal, or pumped storage hydroelectric powered by tidal may be certified for the RES if they meet all other requirements.

6.5 Solar and Wind

Projects utilizing solar or wind energy may be certified for the RES if they meet all other requirements.

7 Vintage

If the project's first date of commercial operation is on or after January 1, 2015 (the "Threshold Eligibility Date" or "TED"), it is eligible for evaluation as a Tier 1 project. Existing projects with a first date of commercial operation before January 1, 2015, are only eligible if they are VGFs. VGFs are projects that are upgraded, returned to service, or relocated, and must meet the specified requirements described in this section to be Tier 1 eligible.

7.1 In-Service Date

The in-service date is the date of commercial operation if the applicant is submitting a project SoQ request or the planned date of commercial operation if the applicant is submitting a project PSoQ request. The in-service date information is collected during project registration and may not be changed in the certification submission.

For VGFs, the in-service date refers to the date when the original project first entered commercial operation (i.e., before the project was upgraded, returned to service, or relocated). VGF's PSoQ or SoQ requests will also need to report and document the in-service date of the incremental upgrade, the date returned to service, or the date the relocated project became commercially operational.

7.2 Demonstration of Commercial Operation

Each applicant submitting an SoQ request for a project must submit materials sufficient to demonstrate that it has been constructed and achieved commercial operation. Such information includes:

- A formal letter declaring the date commercial operation has been achieved
- A third-party engineering or vendor commissioning report verifying the project is fully commissioned and operating and confirming the installed capacity in MW
- Data and information provided to NYSERDA from the NYISO or local utility company verifying the project is available and capable of producing electricity, or from an internet-enabled electric meter for DER generation, (e.g., Permission to Operate (PTO) letter issued by the appropriate interconnecting authority or equivalent)
- For fuel-based projects such as those burning biomass, the contractor must provide procedures on fuel measurements and maintain detailed recordkeeping on the use of both eligible and ineligible fuels and the energy produced by each fuel category
- Any other supplemental information that may be necessary to verify that the project is operating and consistent with the conditions under which a PSoQ was granted, if applicable

In some instances, an applicant may not need to upload a separate document to meet each of these criteria (for example, a non-fuel-based project may submit one commissioning report that contains within it a formal letter stating the date of Commercial Operation and meter data verifying electricity production). In these situations, the applicant may upload the same document for multiple requirements or upload an

explanation of why a separate document does not apply. VGFs must submit documentation noting the eligible commercial operation date of the upgrade, return to service, or relocated power.

Applicants submitting a request for a project using a biomass fuel must also meet all RES feedstock and verification requirements as described in the Biomass Power Guide.⁹

7.3 Incremental Upgrades

The incremental production associated with the upgrade of an existing project is eligible for Tier 1 of the RES if it meets certain requirements. The requirements vary based on whether the project utilizes a non-intermittent resource (i.e., biomass, fuel cells) or an intermittent resource (i.e., hydro, wind or solar) to produce energy. Once granted an SoQ, only the eligible production determined to result from the incremental upgrade will be considered for Tier 1 of the RES program.

To obtain a PSoQ for a project already in commercial operation planning an upgrade, the applicant will need to register a new provisional project and submit a request for a PSoQ for the incremental production. The provisional Nameplate Capacity (MW-AC) entered by the applicant should indicate the total capacity of the project after the upgrade. After the provisional project registration is approved, the applicant can submit a PSoQ request for the incremental production associated with the project. Once the upgrade is complete, the applicant associated with the upgrade project must submit a SoQ request.

If a project that has multiple generating units aggregating to a single PTID applies for eligibility using the meter data reported for that PTID, then the engineering report must include all data for all generating units. Tier 1 RECs will only be issued for the portion of generation deemed eligible.

If a project that has multiple generating units aggregating to a single PTID applies for eligibility for an individual project and provides an engineering report that does not include all the projects reporting under that PTID, then the applicant will be required to separately register all projects aggregating to the PTID in NYGATS, and have all meter data reported by a Qualified Independent Party per the meter data loading requirements set out in the NYGATS Operating Rules in order to have the SoQ submission approved. Certificate creation will occur for the individual projects and Tier 1 RECs will be issued for the portion of generation deemed eligible.

7.3.1 Requirements for Non - Intermittent Resources

Existing, non-intermittent electric generating projects associated seeking RES Tier 1 certification for increased capacity/production derived from eligible fuels must be certified as an incremental upgrade. To be considered for Tier 1 certification, applicants representing these projects must first provide the historic generation baseline from RES eligible fuels. The historic generation baseline will be calculated on an energy basis, with the baseline generation calculated as the average annual RES eligible generation from the three calendar years from 2012 through 2014 (inclusive),¹⁰ or for the first 36 months after the in-service date if that date is after January 1, 2012. For biomass projects, only RES eligible biomass fuels will be included in the baseline calculation.

To qualify as an upgraded generation project, an applicant representing a VGF must demonstrate to NYSERDA that a material capital investment in equipment or facilities has been made to the generation project on or after January 1, 2015, other than expenditures for routine operations, maintenance and/or

repair. The applicant must also provide the date the capital investment was made, defined as the purchase of equipment or projects or a contract with an engineering, design, and construction provider.

The specific requirements for the investment based on project type are described as follows:

1. An applicant representing a project already using only RES eligible fuel types (i.e., a biomass-only plant, or a fuel cell project) will need to demonstrate that such investment directly results in one of the following conditions:
 - A material increase in the efficiency of its generation process, resulting in an increase in annual energy production of at least 5% under normal operating conditions and normal resource availability, relative to the historic generation baseline
 - An increase to the project's nameplate capacity of at least 10% also resulting in a minimum 5% increase in annual energy production above the historic generation baseline
2. Biomass co-firing projects (multi-fuel projects that use RES eligible biomass fuels and also fire ineligible fuels) will be considered as follows:
 - Applicants representing projects seeking to cofire eligible biomass to generate more than 10% of the total plant output as renewable energy must demonstrate that such investment results in changes to major plant systems that directly result in a permanent increase in biomass energy capacity of at least 10%, also resulting in a minimum 5% increase in annual energy production from RES eligible fuels above the historic generation baseline.
 - Cofiring projects that use RES eligible biomass fuels to generate up to 10% of the total plant's electricity output are not required to demonstrate capital investments. However, to be eligible as an upgrade project, the change in fuel usage must result in an increase of at least 5% higher RES eligible generation relative to the historic generation baseline.

For a PSoQ or SoQ, the applicant must attach documentation of the historic generation baseline and the investment made in the project (if applicable) and include a report prepared or endorsed by an independent professional engineer or other third-party approved by NYSERDA, describing the expected resultant increase in production, and if applicable, capacity. Applicants representing biomass projects may refer to the Biomass Power Guide for more information about requirements for the calculation methodology. For biomass projects, the applicant must also provide a completed copy of the standardized forms for reporting the data and calculation of historic generation baseline. These forms are contained in a Microsoft Excel document available on NYSERDA's RES website.¹¹

7.3.1.1 Biomass/Biogas Upgrades

For a PSoQ or SoQ, the applicant must attach a report, prepared or endorsed by an independent professional engineer or other third-party approved by NYSERDA, that documents specific upgrades and associated investments that have been or will be made to the referenced project. The report must document:

- The historic generation baseline of average annual production (not less than three years or the project’s operating lifetime), with the corresponding meter data or best available data sources.
- The post-upgrade expected average annual production.
- The incremental production, of the expected average annual production due specifically to the completed or proposed upgrades/investments.
- A Biomass/Biogas Evaluation Report describing the electric energy producing potential of the project, which addresses the type and duration of permits needed (if applicable, including expiration and anticipated extensions), assesses fuel availability at the site, and if applicable, any waste residues at the site and describes the incremental upgrade as proposed.

7.3.2 Requirements for Intermittent Resources

The incremental production associated with an upgrade of an existing hydroelectric, wind, or solar project must meet certain requirements to be certified under the RES. Only the production resulting from the incremental upgrade will be considered eligible for Tier 1 the RES, measured as the percentage over the historic generation baseline of average annual production. The applicant must also demonstrate significant equipment upgrades that are not the result of normal capital and/or operations and maintenance activities.

An applicant representing a project will need to demonstrate that such investment directly results in one of the following conditions:

- A material increase in the efficiency of the project’s generation process, resulting in an increase in annual energy production of at least 5% under normal operating conditions and normal resource availability, relative to the weather-normalized annual energy production prior to the upgrade.
- An increase to the project’s nameplate capacity of at least 10% also resulting in a minimum 5% increase in annual energy production under normal operating conditions and normal resource availability, relative to the weather-normalized annual energy production prior to the upgrade.
- NYSERDA will use the average historic baseline generation and a 3rd party engineering report to calculate the project’s Incremental Upgrade percentage for NYGATS Tier 1 eligibility.

7.3.2.1 Hydroelectric Upgrades

The applicant must demonstrate that no new storage impoundments have been installed for the hydroelectric generating project while implementing the upgrade.

To be eligible for a PSoQ or SoQ, the applicant must attach a report prepared by an independent professional engineer that documents specific upgrades and associated investments that have been or will be made to the referenced project. The report must document:

- Historic generation baseline of average annual production (not less than 10 years or the project's operating lifetime) with the corresponding water flows as measured by USGS gauges or best available data sources
- The post-upgrade expected average annual production
- The incremental production, expressed as a percentage, of the expected average annual production due specifically to the completed or proposed upgrade investments

The report must also reflect the production according to the metering configuration that will be utilized in NYGATS for REC creation. For example, if the project will be aggregated with other projects under a single point of interconnection for purposes of reporting into NYGATS, the engineering report should utilize the generation at the point of interconnection for the production calculations previously listed and should include production from all the projects at the aggregation point in the analysis. If a project will be separately metered and reported to NYGATS independently, the engineering report should utilize the project's generation on a standalone basis.

The approach for calculating the historic generation baseline, the post-upgrade expected average annual production, and the percentage of such production attributable to the upgrade entails the development of a mathematical model to simulate monthly and annual energy production. Applicants can propose an alternative approach to these calculations provided the approach can predict the incremental production with comparable accuracy.

The model would incorporate available stream flow data (USGS gauges or best available data sources), reservoir management requirements (determined by FERC license conditions), and the performance characteristics of the generating equipment (based on the manufacturer's guarantees or field testing) as parameters. The simulation model should be based on water-balance continuity (all inflows match outflows). Simulation results should be calibrated to actual electrical output over the historical periods that contain the most detailed and complete records (at least monthly flow data, with complete information on water utilization). Overall plant efficiency may be adjusted as needed to adjust simulated production to match actual production. Pre-and post-upgrade simulations should be used to determine the percentage of electrical output attributable to the upgrade in an average year, where an average year means average annual flow conditions over the most recent representative historical period of not less than 10 years. If the project has been operating for less than 10 years, the historic generation baseline will be calculated based on the number of years the project has been in production.

In constructing the simulation model, any information on historical water utilization (i.e., minimum flow restrictions, bypass flows, and spillage) should be considered and the model should assume the operation of the project conforms to the guide curves as laid out in the FERC license. Any FERC license constraints that will, in the future, change current reservoir management practices should be accounted for in the post-upgrade simulation. If the project enters into a contract with NYSERDA for the purchase of Tier 1 RECs, the seller will be required, on a semiannual basis, to compare the actual water flows and power production with simulated production post upgrade for the same period to determine the degree of accuracy of the projected incremental power production.

7.3.2.2 Wind Upgrades

For a PSoQ or SoQ, the applicant must attach a report prepared by an independent professional engineer, meteorologist, or other third-party approved by NYSERDA that documents specific upgrades and associated investments that have been or will be made to the referenced project. The report must describe the electric energy potential of the upgraded project, the wind resource potential at the site and the incremental upgrade as proposed.

The report must document:

- (1) The most recent 10-year historic baseline generation of the project or the available equivalent of the entire pre-upgrade operating history of the project with the corresponding meter data or best available data sources.
- (2) The post upgrade expected annual production resulting from the proposed upgrade. The Incremental Upgrade percentage will be calculated based on the difference of post upgrade expected annual production resulting from the proposed upgrade.

NYSERDA will use the average historic baseline generation and the third-party report to calculate the project's Incremental Upgrade percentage for NYGATS Tier 1 eligibility. The calculation will be based on the difference of item (2) minus item (1) divided by item (2), using average historic generation (1) and the post upgrade engineering report (2) to result in the NYGATS Tier 1 Eligibility calculation.

7.3.2.3 Solar Upgrades

For a PSoQ or SoQ, the applicant must attach a report, prepared by an independent professional engineer or other third-party approved by NYSERDA that documents specific upgrades and associated investments that have been or will be made to the referenced project. The report must document:

- (1) The most recent 10-year historic baseline generation of the project or the available equivalent of the entire pre-upgrade operating history of the project with the corresponding meter data or best available data sources.
- (2) The post upgrade expected annual production resulting from the proposed upgrade. The Incremental Upgrade percentage will be calculated based on the difference of post upgrade expected annual production resulting from the proposed upgrade.
- (3) A Solar Resource Evaluation Report describing the electric energy producing potential of the project, which assesses the solar resource potential at the site and describes the incremental upgrade as proposed.

NYSERDA will use the average historic baseline generation and the third-party report to calculate the project's Incremental Upgrade percentage for NYGATS Tier 1 eligibility. The calculation will be based on the difference of item (2) minus item (1) divided by item (2), using average historic generation (1) and the post upgrade engineering report (2) to result in the NYGATS Tier 1 Eligibility calculation.

7.4 Return to Service Project

The entire output of a project that does not meet the TED requirements can qualify as a Return to Service generation unit and be eligible for Tier 1 if the applicant can demonstrate to NYSERDA that the project has not been in commercial operation for at least 48 consecutive months prior to the return to service date noted in the PSoQ or SOQ request. The applicant must submit written documentation of the applicable dates in and out of service, such as an engineering report, formal letter, and/or data from NYISO or the local utility.

7.5 Relocated Project

A project meeting the following definition of a relocated Tier 1 generation project will be considered eligible for Tier 1 if the applicant demonstrates that it meets all other eligibility requirements. A relocated project is a generation project whose prime mover (per Table 3) was used on or before the TED to generate electrical energy outside of the NYISO Control.

Table 3. Prime Mover Definition

Energy Source	Definition of Prime Mover for Energy Source
Landfill Gas	The entire internal combustion engine or combustion turbine.
Biomass	The entire boiler.
Wind	The entire wind turbine, including the generator, gearbox (if any), nacelle, rotor, and blades.
Hydroelectric	The entire turbine and structures supporting the turbine, not necessarily including the building housing the turbine.
Solar PV	The modules and inverters.
Digester gas	The entire digester unit and internal combustion engine or combustion turbine as applicable.

8 Aggregated Projects

Applicants representing aggregated projects may submit a PSoQ or SoQ request if they are of the same technology and tier and reach commercial operation during the same calendar year. The applicant must provide complete information about the aggregated projects, providing project-specific data for all fields that do not apply across all projects in the PSoQ or SoQ request.

8.1 Registering Aggregations in NYGATS

As with individual projects, an applicant with an aggregated project must set up a NYGATS project registration before completing a PSoQ or SoQ request. To register an aggregation, the applicant must first set up one aggregation account, then the applicant may enter information for one or more individual projects within the aggregation account. For additional information on project registration see NYGATS website and materials.

The PSoQ or SoQ request will follow the same structure as project registration and will apply to the same individual projects registered in the aggregation account.

8.2 Provisional Aggregations

There is no registration form specific to provisional project aggregations in NYGATS. However, an applicant may submit a PSoQ request for a project by completing a registration based on the information at the aggregate level. The registration should reflect the total capacity of all projects to be included in the aggregation, and the average capacity factor or aggregate maximum annual energy across all projects included. The applicant should enter the anticipated in-service date for the last project that will be completed and included in the aggregation. For any other data fields required that vary across the projects, the applicant may enter n/a. Project aggregations will need to demonstrate eligibility and compliance with the requirements noted in section 8.1 and will need to complete a NYGATS registration for an aggregated project once operational and ready to submit a SoQ request.

9 Attestations

For a submission to be deemed complete, the applicant must acknowledge and agree to the provided attestations. These statements confirm the applicant reviewed and understands the SoQ requirements as described in this document, is an authorized representative of the project, acknowledges NYSERDA's rights to request additional information, and verify that all information submitted is complete, true, and accurate.

In addition to these requirements, NYSERDA or persons acting at its behest may conduct audits and/or site visits at NYSERDA's discretion at any time to further assist in verification and ongoing RES compliance. NYSERDA will have sole discretion to determine if any required ongoing information filings are material to a project's PSoQ or SoQ. If a project is determined to have experienced a material change, then NYSERDA will have the sole discretion to require the project to be resubmit a request for PSoQ or SoQ.

10 Next Steps

10.1 Submission Review

NYSERDA will first review all PSoQ and SoQ submissions for completeness. If the submission is missing material information, NYSERDA will email the applicant any deficiencies. Once a submission is deemed complete, NYSERDA will either grant or deny a PSoQ or SoQ within 30 days.

10.2 Issuance of PSoQ or SoQ

Once NYSERDA makes a determination on the applicant's PSoQ or SoQ request, the contact listed in the NYGATS account for the project will receive an e-mail that the submission has been reviewed. The applicant can then log on to the project's NYGATS record to view the official decision. VDER Resources will not be issued a SoQ.¹²

If NYSERDA grants an SoQ, the qualification will be noted in the project's NYGATS record in the documents and attestation view section. The record will include a signed decision letter that notes the date of SoQ approval, as well as a summary of pertinent project attributes. NYGATS RECs minted after the SoQ approval date will be eligible to be used for RES compliance.

If a PSoQ or SoQ request is denied, then the applicant will be advised of the basis for the denial. The applicant may resubmit within its existing NYGATS record at any time after the identified problems are corrected.

10.3 Ongoing Requirements, Revocation or Suspension

All projects must notify NYGATS and NYSERDA of any changes in ownership and/or authorized representative. In addition, some projects are subject to ongoing requirements.

Ongoing Requirements for Imports

For imported RECs to be flagged as eligible towards Tier 1 compliance obligations, the requirements contained within the Clean Energy Standard Phase I Implementation Plan Proposal and Final Implementation Plan must be met. Applicants should also refer to the NYGATS operating rules and associated documents for more details.

Ongoing Requirements for Fuel-Based Technologies

Fuel-based technologies will be required to submit periodic reports summarizing fuel consumption and actual emissions. In addition to these requirements, NYSERDA or persons acting at its behest may conduct audits and/or site visits at NYSERDA's discretion at any time to further assist in verification and ongoing RES compliance.

For biomass projects, the exact requirements for ongoing verification to ensure RES program compliance will be project specific. Refer to the Biomass Power Guide for additional information regarding data and testing results required.

10.4 NYSERDA Right to Verify Information and Revoke or Suspend SoQ

All information submitted by applicants is subject to verification by NYSERDA. If NYSERDA finds an applicant provided false information, failed to notify NYSERDA of a change in eligibility status, or failed to comply with the RES program rules, it will provide notice to the project's authorized representative and an opportunity for a hearing. NYSERDA has the authority to suspend or revoke the project's Tier 1 RES SoQ if the failures are not remedied within the specified timeframe. If the project's SoQ is suspended, NYSERDA will provide notice to the project's authorized representative through NYGATS. The notice will include the period for which the project cannot produce Tier 1 RES-eligible RECs, and the NYGATS administrator will suspend the Tier 1 RES qualification for RECs minted during the suspension period. If the project's SoQ is revoked, the project may not produce Tier 1 RES-eligible RECs until it has remedied the failure, resubmitted a SoQ request, and received an approval from NYSERDA on the SoQ request. NYSERDA will provide notice to the project's authorized representative through NYGATS that includes the period that must elapse and the conditions that must be met before the project may resubmit.

Appendix A: Eligibility Requirements for Biomass Projects

A.1 Eligible Biomass Feedstocks

A.1.1 Biogas

A.1.1.1 Landfill Gas Produced On-Site

Landfill organics converted to methane produced through natural decomposition for use on-site in internal combustion engine gensets, fuel cells, or other fueled gensets. Projects transporting landfill gas to the generation site by pipeline must meet the specific requirements for renewable pipeline gas specified in Section A.1.a.iii.¹³

Project Specific Requirements: There are no RES Project-Specific Technology Requirements that apply to landfill gas projects that only use biogas produced and consumed on-site for grid delivered power generation. However, the project must submit documentation required for all biomass projects and is subject to verification by NYSERDA. For detailed information on operating requirements, the applicant should refer to the Biomass Power Guide.

The Biomass Power Guide describes the Comparative Emissions Alternative Compliance Protocol (CEACP) method to obtain Provisional status under the NY Renewable Energy Standard (RES). This process includes: “(1) demonstrating through environmental performance data¹ that the proposed gasification/generation system design will limit the formation and emission of one or more relevant contaminant of concern to levels below those that would be generated from either the direct combustion of clean wood or gasification and subsequent syngas combustion using clean wood, and (2) implementation of ongoing feedstock testing to ensure that any contaminants for which the avoidance/elimination by the proposed system has not been sufficiently demonstrated are within threshold levels.”²

A.1.1.2 Anaerobic Digestion

Biogas used in an anaerobic digester may be derived from animal wastes (manure), agricultural by-products, food processing residue, or wastewater.¹⁴ Projects transporting biogas to the generation site by pipeline must meet the specific requirements for renewable pipeline gas specified below.

Renewable generating projects using biogas derived from animal manure must meet the following requirements:

- **SPDES-Permitted Facilities:** A renewable generating project that is a Concentrated Animal Feeding Operation (CAFO) and is required to have a State Pollutant Discharge Elimination

¹ Environmental performance data includes scientific analysis, pilot scale testing, or testing at an analogous system constructed elsewhere.

² The threshold levels and testing procedures for the alternative compliance must be equivalent to the Clean MRF Fuels testing protocol. Additional details are provided in the Exhibit 7 and Appendix E of the Biomass Power Guide.

System (SPDES) permit by New York State Department of Environmental Conservation must be currently operating in compliance with its SPDES permit. The project will have a current Agricultural Waste Management Plan (AWMP) developed by a duly qualified Agricultural Environmental Management (AEM) Planner. The project must provide (via upload with its Tier 1 submission) a copy of its SPDES permit, its AWMP, and documentation that it is compliant with both to be certified.

- **Facilities Not Required to Have a SPDES Permit:** A renewable generating project that is a Concentrated Animal Feeding Operation (CAFO) but is not required to have a State Pollutant Discharge Elimination System (SPDES) permit by New York State Department of Environmental Conservation. The project is or will be operating in compliance with the best management practices for a project of its size set forth in the Principles and Water Quality Protection Standards specified in the Agricultural Environmental Management (AEM) Framework and Resource Guide developed by the NYS Department of Agriculture and Markets and the NYS Soil and Water.

Conservation Committee. The project must provide documentation that it is compliant with such best practices to be certified.

A.1.1.3. Renewable Pipeline Gas (Biogas Transported to the Site via Pipeline)

Landfill gas or biogas from anaerobic digestion that is prepared for use off-site by a process of upgrading the gas to pipeline quality and delivering it into the natural gas pipeline infrastructure.

A renewable generating project using renewable pipeline gas (RPG) must satisfy the following criteria:

- Common carrier RPG resources will be considered eligible only if sourced and used in the same state to generate power delivered to New York.
- Sufficient metering is in place at the landfill gas (LFG) or biogas collection/processing project to allow accurate accounting of LFG or biogas collected, upgraded and injected as RPG into the common carrier.
- The project must keep and provide sufficient records on physical delivery from common carrier, gas consumption, and gas quality to pro rate the facilities monthly electrical generation based on the ratio of the total RPG contract gas energy and the total gas energy used.
- To be RES eligible, contracts for RPG transported over a common carrier must be new contracts. The buyer must notify the gas producer as part of the new RPG contract or modification that the gas contract is being purchased for conversion to RES eligible power and is subject to the accounting rules of the RES program. The RPG producer must certify that the gas delivered under contract is produced from new resources, i.e. new or expanded RPG production systems.

To be certified, the applicant must attest to be in compliance with these criteria. NYSERDA retains the right to verify the applicant's claims through an audit.

A.1.2 Herbaceous Biomass

Herbaceous biomass feedstocks are unadulterated herbaceous biomass including:

- **Clean Agricultural Residue** – herbaceous matter remaining after the harvesting of crops on agricultural lands.
- **Sustainable Yield Energy Crops** – herbaceous crops grown specifically for the purpose of being consumed as an energy feedstock (energy crops).

There are no project specific requirements for facilities using herbaceous biomass feedstocks to obtain RES certification. The project must submit documentation required for all biomass facilities and is subject to verification by NYSERDA.

A.1.3 Clean Woody Biomass

Clean woody biomass feedstocks are unadulterated biomass fuel resources. Specific requirements to obtain RES certification, and the documentation needed to substantiate eligibility, differ by specific fuel types.

A.1.3.1. Agricultural Woody Biomass

This fuel type includes the following agricultural-based biomass feedstocks:

- **Clean Agricultural Residues** – woody matter remaining after the thinning or pruning of orchard trees on agricultural lands.
- **Sustainable Yield Energy Crops** – woody crops grown specifically to be consumed as an energy feedstock. Some examples include willow, poplar, sycamore, and ash species (woody), and miscanthus, hemp, and grasses (herbaceous).

There are no project specific requirements for facilities using agricultural woody biomass feedstocks to obtain RES certification. The project must submit documentation required for all biomass projects and is subject to verification by NYSERDA.

A.1.3.2. Forest Biomass

This fuel type includes the following forest-based biomass feedstocks:

- **Harvested Wood** – wood harvested during commercial harvesting
- **Silvicultural Waste Wood** – wood harvested during timber stand improvement and other forest management activities conducted to improve the health and productivity of the forest

Renewable generating projects that produce electricity using one or more of these fuel resources must prepare, monitor, and maintain the Forest Management Plan and the Harvest Plan required for participation in the RES.

Forest Management Plan (FMP). The renewable generating project must have and comply with an approved FMP. The FMP should address the overall management goals and performance standards that need to be used during the procurement of the biomass resource for the project. The FMP is required to

include standards and guidelines for sustainable forest management and the adherence to management practices that conserve biological diversity, productive forest capacity, and promote forest ecosystem health. The plan must be completed by a qualified forester and approved by the Department of Public Service. To receive a Statement of Qualification under the RES, the applicant must upload a copy of the FMP with the submission. Furthermore, each of biomass fuel suppliers for the biomass project must comply with the FMP for the project.

Harvest Plan. Each fuel supplier must prepare a harvest plan for each parcel where harvested biomass is supplied to a RES program eligible project. The harvest plan should include landowner objectives; a map of the area to be harvested; skid road layout; locations of all streams, wetlands, and water bodies; forest type designation, anticipated volume of wood to be harvested; silvicultural techniques and best management practices to be implemented; and provisions for the monitoring of harvest operations by a professional forester. Periodic inspections of harvesting operations by State authorities or approved nongovernmental forest certification bodies are performed to ensure that harvest operations conform to the standards. To receive a Statement of Qualification under the RES, the applicant must upload a copy of the harvest plan for each of its fuel suppliers. If the project sources feedstocks from multiple suppliers, the applicant must provide all relevant harvest plans.

A.1.3.3. Clean Wood Residues

Clean wood residues include various types of eligible woody resources:

- **Mill Residue Wood** – hogged bark, trim slabs, planer shavings, sawdust, sander dust, and pulverized scraps from sawmills, millworks, and secondary wood products industries.
- **Pallet Waste** – unadulterated wood collected from portable platforms used for storing or moving cargo or freight.
- **Site Conversion Waste Wood** – wood harvested when forestland is cleared for the development of buildings, roads, or other improvements.

There are no project specific requirements for projects using clean wood residues feedstocks to obtain RES certification. The project must submit documentation required for all biomass projects and is subject to verification by NYSERDA.

A.1.3.4. Clean Urban Waste Wood

There are two types of clean urban wood waste that qualify as eligible biomass feedstocks:

- **Source Separated Urban Wood Waste** – source-separated combustible, untreated, and unadulterated wood portion of municipal solid waste (MSW) or construction and demolition (C&D) debris, including biomass prepared by a densification process resulting in a uniformly sized, easy to handle fuel pellet or briquette.
- This type of feedstock qualifies for the RES without further requirements if it meets the following EPA definition for source separation: "Source separation is defined as segregating various wastes at the point of generation (e.g., separation of paper, metal, and glass from other wastes to make recycling simpler and more efficient)."

- **Not Source Separated Urban Wood Waste** – clean wood recovered from C&D debris at a permitted Materials Reclamation Project (MRF) or C&D processing project. These C&D residues (referred to as Clean MRF fuels in the Biomass Power Guide) may not include non-recyclable wood (e.g., plywood, particle board, and glued wood products), paper, paperboard boxes, textiles, food, leather, yard waste, and leaves.
- This type of eligible fuel is subject to additional quality control safeguards and testing. Applicants must meet these requirements to receive an SoQ:
 - Projects may only procure Clean MRF fuels from suppliers authorized to handle C&D wastes by a State or Canadian Province. Permitted suppliers must be reviewed and approved by NYSERDA.
 - Beneficial Use Determination (BUD): Applicants must have a Beneficial Use Determination for use of the fuel. A BUD is an authorization from the applicable governmental body for the beneficial use of a waste resource for use in a process or product (in this case for use as a fuel source). A copy of the BUD is required for Operational projects, but it is not required for a provisional status.
 - Air Permits: Operational projects must provide copies of all required air permits. These are not required for provisional status.
 - Formulate and implement Quality Assurance/Quality Control (QA/QC) procedures for procuring, inspecting, sampling and testing Clean MRF Fuel as noted in the Biomass Power Guide. This requirement includes the following:
 - Fuel (QA/QC) Plan that specifically addresses Clean MRF Fuels. Operational applicants will be required to provide a copy of this plan with the certification submission. The plan will cover:
 - The Procurement Plan for the Clean MRF Fuels including supply contract provisions to implement the safeguards as they apply to the suppliers and provisions for allowing for NYSERDA review and approval.
 - Procedures for recording, inspecting, and sampling of all deliveries and excluding fuel deliveries that fail to meet the quality standards.
 - Procedures and schedule for sample testing by qualified laboratories, in accordance with the fuel quality specification for Clean MRF Fuels (Contained in the Biomass Power Guide, Biomass Feedstock References, and Links Document 1).
 - Required Record Keeping – Applicants should plan to maintain records required by the fuel quality QA/QC safeguards. Records for all deliveries of Clean MRF Fuels must be kept along with monthly test reports of fuel quality with respect to the fuel quality standard for Clean MRF Fuels (See Biomass Feedstock References and Links Document 5, page A-8). Test reports must be submitted to NYSERDA to maintain certification status.

A.1.4 Adulterated Biomass

Eligible adulterated biomass feedstocks include mixed urban biomass residues, agricultural byproducts, and food processing residues.

A.1.4.1. Mixed Urban Biomass Residues

Defined as the mixed and non-recyclable wood (treated wood such as plywood and particle board) portion of MSW and C&D residues as distinguished from the clean wood materials separated at either the source or MRF and listed as RES unadulterated biomass. This category also includes other types of biomass feedstocks that do not fall within the categories of unadulterated biomass such as paper, paperboard boxes, textiles, yard waste, and leaves.

Renewable generating projects using these biomass fuels must meet the following requirements for RES eligible generation:

- The renewable generation project must use a primary feedstock conversion technology that converts biomass first to a liquid or gaseous fuel before being used to generate electricity and must meet the requirements for liquid fuel production or gasification described in Sections A.2.b and A.2.e.
- If the biomass residues are non-source separated, the project must demonstrate that the resources come from DEC-permitted solid waste projects. For projects, outside of New York, the project must demonstrate that they are operating using equivalent practices and meeting the same environmental requirements as DEC permitted projects.
- NYSERDA must review and approve the solid waste project and the associated biomass sorting technique.
- Applicants must have a Beneficial Use Determination (BUD) for use of the fuel. A BUD is an authorization from the applicable governmental body for the beneficial use of a waste resource for use in a process or product (in this case for use as a fuel source).¹⁵ Operational projects must also provide a copy of the Beneficial Use Determination and all required air permits.

A.1.4.2. Agricultural Byproducts or Food Processing Residue

Agricultural byproducts or food processing residue is defined as agricultural byproducts such as leather, offal, and food processing residues.

Project Specific Requirements (not applicable for anaerobic digestion projects) – Unless these feedstocks are converted to biogas via anaerobic digestion, they are only eligible for RES certification if the project meets the following criteria:

- The renewable generation project must first use a primary feedstock conversion technology that converts biomass to a liquid or gaseous fuel before being used to generate electricity and must meet the requirements for liquid fuel production or gasification described in Sections A.2.b and A.2.e.

- The project must show proof of comparative emission test results. The project must demonstrate that using the primary feedstock conversion technology, the power generated from biogas or liquid biofuel derived from adulterated sources produces a lesser or equal amount of emissions to that of biogas or liquid biofuel using unadulterated sources as feedstock. The generating project must develop an emissions test plan in accordance with the CES Order to verify emissions comparability.

A.1.5 Biomass Feedstock References and Links

The applicant may use the references below to obtain detailed information directly from the relevant documents.

- New York State Renewable Energy Standard: Biomass Power Guide, Antares Group Inc., Revised June 2018 . nyscrda.ny.gov/-/media/Files/Programs/Clean-Energy-Standard/2018-June-Biomass-Power-Guide.pdf
- Order Approving Implementation Plan, Adopting Clarifications and Modifying Environmental Disclosure Program, State of New York Public Service Commission, Case 03-E-0188, p. 53-56 April 14, 2005. Order Authorizing Additional Main Tier Solicitations and Directing Program Modifications, State of New York Public Service Commission, Case 03-E-0188, p. 20-28 January 26, 2006.
- Rulemaking Allowing Clean Wood Separated from Construction and Demolition Waste at Material Reclamation Projects to be Eligible for Use as Biomass Fuel in the Renewable Portfolio Standard Program. Niagara Generation, LLC, Retail Renewable Portfolio Standard, Order Approving Petition with Modifications, State of New York Public Service Commission, Case 09-E-0843, November 22, 2010, p 16-17.
- Order Adopting a Clean Energy Standard, State of New York Public Service Commission, Case 15-E-0302, Appendix A, August 1, 2016.
- Order Approving Phase I Implementation Plan, State of New York Public Service Commission, Case 15-E-0302, February 22, 2017.
- Order Approving Alternative Protocol for Comparative Emission Test for Biomass Gasification Technologies, Case 15-E-0302 July 13, 2017.

A.2. Biomass Conversion Types

Applicants must specify the type of conversion technology or process used at the project. Eligible conversion types include direct combustion, gasification, decomposition, anaerobic digestion, and liquid fuel production. If the project utilizes biogas derived from landfill gas, it must select decomposition. If the project utilizes biogas derived from anaerobic digestion as a feedstock, it must select Anaerobic Digestion. Direct combustion is not eligible for renewable energy generation using adulterated biomass feedstocks.

A.2.1 Direct Combustion

Direct combustion utilizes solid-fueled power boilers for electricity generation (includes combined heat and power technologies). Electricity generated from adulterated biomass feedstocks used in a direct combustion process is not eligible for the RES.

A.2.2 Gasification

Gasification is a process used to generate clean syngas, which can be used in reciprocating engines, gas turbines, fuel cells, etc. (includes combined heat and power technologies). If the project uses eligible adulterated feedstocks, to be eligible for the RES the applicant must demonstrate that the resulting emissions from the electricity generation are equal to or less than emissions for the process if unadulterated biomass feedstocks were used. The documentation that must be submitted is proof of comparative emission test results. The generating project must develop an emissions test plan in accordance with the CES Order to verify emissions comparability.

A.2.3 Decomposition

With decomposition, landfill organics are converted to methane produced through natural decomposition for use in internal combustion engine gensets, fuel cells, or other fueled gensets.

A.2.4 Anaerobic Digestion

With anaerobic digestion, high-moisture organic wastes are converted to methane in a digester for use in internal combustion engine gensets, fuel cells, or other fueled gensets.

A.2.5 Liquid Fuel Production

Liquid fuel production converts biomass to a clean liquid fuel that can be used in reciprocating engines, fuel cells, gas turbines, etc. (includes combined heat and power technologies). The conversion process may be liquefaction, esterification, or thermochemical pyrolysis. If the project uses eligible adulterated feedstocks to produce liquid fuel, to be eligible for the RES the applicant must demonstrate that the emissions resulting from the electricity generation are equal to or less than emissions for the process if liquid fuel produced from unadulterated biomass feedstocks was used. The documentation that must be submitted is proof of comparative emission test results. The generating project must develop an emissions test plan in accordance with the CES Order to verify emissions comparability.

A.3 Cofiring

Generation projects using both eligible biomass fuels and ineligible fuels (i.e., fossil and ineligible biomass fuels) are subject to power production measurement and accounting rules which are designed to ensure that only the RES Attributes associated with the eligible renewable portion of power generation at the project are eligible for the RES program.

Reliable and accurate measurement methodologies must be employed to track RES Attribute production at the power plant. The methodologies are based on the following:

- An accurate measurement and accounting of the RES program eligible fuel source's heat input to the conversion device in accordance with the Biomass Power Guide

- An apportionment of total electricity generation based on the fraction of the total conversion device heat input provided by the RES program eligible fuel source

An applicant must certify that the project will meet these measuring and reporting requirements to obtain certification.

Endnotes

- 1 nysersda.ny.gov/All-Programs/Programs/Clean-Energy-Standard/Important-Orders-Reports-and-Filings/Filings-Orders-and-Reports
- 2 nysersda.ny.gov/All-Programs/Programs/NYGATS
- 3 Subject to fulfillment of the associated delivery requirements
- 4 A generating unit consists of the sum and total of all equipment necessary for production of electricity
- 5 A Point Identifier is a resource-specific numerical identifier used by the NYISO's software systems to identify Generators and other Suppliers
- 6 nysersda.ny.gov/All-Programs/Programs/NYGATS
- 7 <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={FD2886CF-87D6-4F02-A252-95F9094A2CED}>
- 8 nysersda.ny.gov/All-Programs/Programs/Clean-Energy-Standard/Important-Orders-Reports-and-Filings/Filings-Orders-and-Reports
- 9 NYSERDA's Biomass Power Guide is available on NYSERDA's website at nysersda.ny.gov/All-Programs/Programs/Clean-Energy-Standard/Renewable-Generators-and-Developers/RES-Tier-One-Eligibility/Eligibility
- 10 Based on the January 1, 2015 vintage date established by the CES Order
- 11 nysersda.ny.gov/-/media/Files/Programs/Clean-Energy-Standard/Biomass-Baseline-Calculation-Form.xlsx
- 12 nysersda.ny.gov/-/media/Files/Programs/Clean-Energy-Standard/2018-12-14-Order-Approving-Phase-3-Implementation-Plan.pdf
- 13 For additional information, please visit <https://www.nysersda.ny.gov/-/media/Files/Programs/Clean-Energy-Standard/2018-June-Biomass-Power-Guide.pdf>
- 14 Anaerobic digestion of wastewater is also referred to as Sewage Gas
- 15 For additional information about BUDs, refer to the New York Department of Environmental Conservation website, <http://www.dec.ny.gov/chemical/8821.html>