



*RENEWABLE
ENERGY
PROGRAM*

**CALIFORNIA
ENERGY
COMMISSION**

**RENEWABLES
PORTFOLIO
STANDARD
ELIGIBILITY**

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COMMISSION GUIDEBOOK

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This guidebook was formally adopted by the Energy Commission on April 21, 2004, under Public Utilities Code Section (PUC) 383.5, Subdivision (h), and subsequently revised under this authority and Public Resources Code Section 25747, Subdivision (a), on May 19, 2004, August 11, 2004, May 21, 2005, April 26, 2006, March 14, 2007, and December 19, 2007.

The requirements in this guidebook are based on applicable law, the *Renewables Portfolio Standard Decision on Phase 1 Implementation Issues* (publication number 500-03-023F), the *Renewables Portfolio Standard Decision on Phase 2 Implementation Issues* (publication number 500-03-049F), staff analysis, advice from the Energy Commission's technical support contractor, and public input.

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Abstract

The *Renewables Portfolio Standard Eligibility Guidebook* describes the eligibility requirements and process for certifying renewable resources as eligible for California's Renewables Portfolio Standard (RPS) and describes the Energy Commission's accounting system to verify compliance with the RPS. California's Renewable Portfolio Standard (RPS) has a goal of obtaining 20 percent of the state's electricity from renewable resources by 2010. This *Guidebook* outlines eligibility and legal requirements, describes reporting requirements, and includes necessary forms and instructions for program participants. This *Guidebook* also describes the Energy Commission's system for tracking and verifying compliance with the RPS.

Keywords

biodiesel, biogas, biomass, certificates, certification, conduit hydroelectric, digester gas, eligibility, geothermal, landfill gas, multi-fuel, municipal solid waste, ocean wave, photovoltaic, power purchase agreement, renewable energy, Renewables Portfolio Standard, repowered, retail sales, small hydroelectric, solar, thermal, supplemental energy payments, tradable renewable energy certificates, TRECs, wind, Western Renewable Energy Generation Information System, WREGIS

I. Introduction

The California Energy Commission (Energy Commission) developed this *Guidebook* to implement and administer its responsibilities under California's Renewables Portfolio Standard (RPS) under Senate Bill 1038,¹ Senate Bill 1078,² Senate Bill 1250,³ and Senate Bill 107.⁴ These laws require retail sellers of electricity to increase the amount of renewable energy they procure each year by at least 1 percent until 20 percent of their retail sales are served with renewable energy by December 31, 2010. Under these laws, the Energy Commission is required to certify eligible renewable energy resources that may be used by retail sellers of electricity to satisfy their RPS procurement requirements, develop an accounting system to verify a retail seller's compliance with the RPS, and award supplemental energy payments (SEPs) to cover the above-market cost of procuring eligible renewable energy resources. Senate Bill 1036,⁵ passed in October 2007, repeals the provisions for awarding SEPs and requires the Energy Commission to terminate production incentives awarded as of January 1, 2002, unless the facility began generating electricity by January 1, 2007. SB 1036 also requires the Energy Commission to transfer remaining unencumbered funds to the retail sellers by March 1, 2008.

This *Guidebook* describes the requirements and process for certifying eligible renewable energy resources for the RPS and describes how the Energy Commission will track and verify compliance with the RPS.

This *Guidebook* establishes efficient and effective processes to encourage participation in California's RPS and assure program credibility to benefit stakeholders, regulators, and consumers. Although this *Guidebook* addresses the Energy Commission's role in implementing the RPS, the Energy Commission recognizes that the California Public Utilities Commission (CPUC) also has a key RPS implementation role.

The enabling legislation established specific roles for the Energy Commission and the CPUC and directs the two agencies to work together to implement the RPS. Although the law assigns lead roles for specific implementation efforts to each agency, the roles of the two agencies are interrelated. The Energy Commission is responsible for

¹ SB 1038; Chapter 515, Statutes of 2002. The pertinent provisions of SB 1038 were formerly codified in Public Utilities Code Sections 383.5 and 445, but are now codified in Public Resources Code Sections 25740 through 25751 as a result of Senate Bill 183 (Chapter 666, Statutes of 2003).

² SB 1078; Chapter 516, Statutes of 2002. The pertinent provisions of SB 1078 are codified in Public Utilities Code Section 399.11 through 399.15. This law was subsequently amended to add Sections 399.16, 399.17, and 399.12.5 under Senate Bill 67 (Chapter 731, Statutes of 2003), Assembly Bill 200 (Chapter 5, Statutes of 2005), and Assembly Bill 2189 (Chapter 747, Statutes of 2006), respectively.

³ SB 1250; Chapter 512, Statutes of 2006. SB 1250 amends pertinent provisions in Public Resources Code Sections 25740 through 25751.

⁴ SB 107; Chapter 464, Statutes of 2006. SB 107 amends pertinent provisions in Public Resources Code Sections 25740 through 25751 and Public Utilities Code Sections 399.11 through 399.16.

⁵ SB 1036, Chapter 685, Statutes of 2007. SB 1036 amends pertinent provisions in Public Resources Code Sections 25740 through 25751.

certifying eligible renewable resources and tracking the procurement of such resources to ensure compliance with the RPS. The CPUC is responsible for establishing targets for the amount of eligible renewable energy resources that retail sellers of electricity must procure to comply with the RPS and verifies compliance with the requirements. Retail sellers include investor-owned utilities (IOUs), electric service providers (ESPs), and community choice aggregators (CCAs).

In February 2003, the CPUC issued a ruling formalizing collaboration on RPS issues, and in March 2003, the Energy Commission adopted a reciprocal agreement. The Energy Commission subsequently developed this *Guidebook* collaboratively with the CPUC.

While this *Guidebook* reflects current requirements, the Energy Commission recognizes that it may need to periodically revise program guidelines to reflect market, regulatory, and legislative developments as well as incorporate the lessons learned from experience implementing the RPS.

A. Related Reports

This *Guidebook* is one of several guidebooks the Energy Commission has adopted to implement and administer the various program elements of its Renewable Energy Program. The Energy Commission's *Overall Program Guidebook for the Renewable Energy Program (Overall Program Guidebook)* describes how the Renewable Energy Program will be administered and includes information and requirements that apply overall to the Renewable Energy Program and the program elements. To qualify for certification as a renewable energy resource eligible for the RPS, an applicant must satisfy the requirements specified in this *Renewables Portfolio Standard Eligibility Guidebook* and the *Overall Program Guidebook*.

Please note that the Energy Commission provides production incentive payments to eligible existing renewable resources, but they must also be eligible for the RPS. For more information, refer to the *Existing Renewable Facilities Program Guidebook*.⁶ For general information on the process of creating, appealing, and implementing RPS guidelines, refer to the *Overall Program Guidebook*.⁷ Program guidebooks are available on-line at the Energy Commission's website at <www.energy.ca.gov>.

B. Outstanding Issues

There are several outstanding issues that could affect these guidelines. The Energy Commission will continue to address these issues collaboratively with the CPUC:

⁶ www.energy.ca.gov/2007publications/CEC-300-2007-005/CEC-300-2007-005-CMF.PDF

⁷ www.energy.ca.gov/2007publications/CEC-300-2007-003/CEC-300-2007-003-CMF.PDF

- Renewable Energy Credits or Certificates (RECs) trading:

Renewable Energy Certificates (also termed “renewable energy credits” or RECs) represent renewable and environmental attributes associated with energy production. Public Utilities Code Section 399.12, Subdivision (g)(1), defines a REC for California RPS purposes to mean a certificate of proof, issued through the accounting system established by the Energy Commission under Public Utilities Code Section 399.13, that one unit of electricity was generated and delivered by an eligible renewable energy resource.

Section 399.12, Subdivision (g)(2), specifies that a REC includes all renewable and environmental attributes associated with the production of electricity from the eligible renewable energy resource, except for an emissions reduction credit issued under Section 40709 of the Health and Safety Code and any credits or payments associated with the reduction of solid waste and treatment benefits created by the use of biomass or biogas fuels.

In addition, Section 399.12, Subdivision (g)(3), specifies that no electricity generated by an eligible renewable energy resource attributable to the use of nonrenewable fuels, beyond a de minimus quantity as determined by the Energy Commission, shall result in the creation of a REC.

RECs and energy procured together as a “bundled” commodity are eligible for the California RPS. RECs sold separately from the underlying energy are termed “tradable” and are not currently eligible toward California RPS procurement requirements. The term “tradable RECs” refers to a concept wherein the renewable attributes may be procured from the renewable generator as a separate commodity from the underlying energy. In place of the term “REC,” the Energy Commission’s generation tracking system, the Western Renewable Energy Generation Information System (WREGIS), uses the term “WREGIS Certificate.”

The law as amended by Senate Bill 107, however, authorizes the CPUC to rule that tradable RECs associated with energy produced from RPS-eligible resources qualify toward RPS procurement requirements in the future, once certain conditions have been met. Tradable RECs may be allowed for RPS compliance after the CPUC and Energy Commission conclude that the tracking system developed by the Energy Commission is operational, is capable of independently verifying delivery of renewable energy to a retail seller, and can assure that RECs are not double counted by any seller within the Western Electricity Coordinating Council (WECC).

Also, the CPUC may limit the amount of tradable RECs that a retail seller may procure to satisfy its RPS requirements. The CPUC is addressing RECs and other RPS implementation issues in its Rulemaking 06-05-027 and Rulemaking 06-02-012 and subsequent RPS Rulemakings.

A preliminary discussion of eligibility requirements and tracking requirements for tradable RECs is provided in this *Guidebook* in anticipation of their possible use for California RPS compliance.

- Determining how customer-side renewable distributed generation resources fit into the RPS:

The law includes solar energy as an eligible resource for the RPS. The CPUC Rulemaking 06-03-004 has been addressing if and how output from renewable distributed generation may be counted toward a retail seller's RPS obligations. The CPUC issued a final decision (D.07-01-018) on January 11, 2007, that allows distributed generation system owners to retain 100 percent of the RECs associated with the distributed generation energy produced. Similarly, the Energy Commission does not require participants of its New Solar Homes Partnership program to relinquish their claims of RECs or to transfer ownership of any RECs to the Energy Commission or any other entity as a condition of receiving New Solar Homes Partnership program funding. This *Guidebook* describes distributed generation issues in the section on eligibility requirements.

Other than the exception noted below, the Energy Commission will certify distributed generation facilities as RPS-eligible only if and when the CPUC authorizes applying tradable RECs toward RPS obligations.

The Energy Commission will certify facilities that might otherwise be considered distributed generation facilities if some or all of the energy produced is sold through a standard contract/tariff executed pursuant to Public Utilities Code 399.20, as implemented through the CPUC Decision 07-07-027 (R.06.05.027).⁸ Similarly, the Energy Commission may certify a facility if the energy generated is sold through a comparable standard contract/tariff approved by a local publicly owned electric utility or if the facility is owned by a utility and meets other requirements.

- Defining fuel specific issues:

The Energy Commission anticipates that new issues may arise that will need to be addressed as implementation continues. The Energy Commission recognizes that some parties may be interested in using hydrogen fuel to generate electricity but recommends deferring the development of implementation guidelines for such facilities. The Energy Commission recommends, however, that only eligible RPS fuel stock may be used to produce hydrogen for use at an RPS-eligible facility.

⁸ Decision 07-07-027 adopts tariffs and standard contracts for water, wastewater and other customers to sell electricity generated from RPS-eligible renewable resources that are up to 1.5 megawatts in size to electrical corporations, for a cumulative statewide total of 250 megawatts.

- Multiple-fuel technologies:

A multiple-fuel facility that uses a combination of fuels that includes renewable fuels or resources and fossil fuel may qualify for the RPS under the scenarios described in Section II (B) (6), with the exception of facilities that meet the criteria described in “Fossil Fuel Use at Qualifying Small Power Production Facilities.”

The Energy Commission may adopt mechanisms to account for the renewable generation from multi-fuel technologies as appropriate. For example, the Energy Commission has developed a method to account for the amount of RPS-eligible energy generated from a multi-fuel technology that uses a mix of natural gas and biogas injected into a gas transportation pipeline. Applicants seeking RPS certification or pre-certification for multi-fuel facilities must propose a method to the Energy Commission on how the generation from the renewable fuel will be measured. See Section II.6 Facilities Using Multiple Fuels.

C. Guidebook Organization

This *Guidebook* is organized as follows:

- I. Introduction
- II. Eligibility Requirements
- III. Certification Process
- IV. Generation Tracking and Verification System
- V. Publicly Owned Utilities
 - Appendix A. Forms
 - Appendix B. List of Acronyms
 - Appendix C. Summary Table of RPS Reporting Requirements

Section II covers eligibility requirements for generators interested in producing electricity that can be procured by retail sellers to comply with the RPS. For this *Guidebook*, “retail sellers” is defined in the *Overall Program Guidebook* and includes California’s three largest IOUs (Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E), multi-jurisdictional IOUs such as PacifiCorp and Sierra Pacific Power Company (electrical corporations with 60,000 or fewer customer accounts in California that also serve retail end-use customers outside California under Public Utilities Code Section 399.17), small IOUs such as Mountain Utilities and Bear Valley Electric Service (a division of Golden State Water Company), and ESPs and CCAs.

Section III discusses the Energy Commission’s certification process, including the following:

- Pre-certification application process for developers of renewable facilities that are, not on-line, with some exceptions, but who are seeking a preliminary determination that their facility will be eligible for the RPS.
- Certification application process for generators with renewable facilities that are on-line who are interested in serving energy to meet an RPS obligation.
- Process to amend certification or pre-certification.

Section IV discusses the data submission requirements for a generation tracking and verification system that will be used to verify retail sellers' compliance with the RPS and to verify that generation is counted only once in California or any other state.

Section V addresses participation of local publicly owned electric utilities in the RPS.

II. Eligibility Requirements

This section describes eligibility requirements for the RPS, including eligibility for out-of-state facilities. In general, a facility is eligible if it uses an eligible renewable resource or fuel, satisfies resource-specific criteria, and is either located within the state or satisfies applicable requirements for out-of-state facilities.

The generation from facilities certified as RPS eligible may qualify for funding under the Energy Commission's Existing Renewable Facilities Program. To receive funding, eligible facilities must satisfy the requirements specified in the Energy Commission's *Existing Renewable Facilities Program Guidebook*.

A. Renewables Portfolio Standard Targets

The CPUC sets annual procurement targets (APTs) for the amount of RPS-eligible energy each retail seller must procure. Public Utilities Code Section 399.15, Subdivision (b)(1), requires the retail sellers to annually increase their renewable procurement by at least 1 percent of retail sales per year so that 20 percent of their retail sales is procured from RPS-eligible resources not later than December 31, 2010. The CPUC sets an "incremental procurement target" (IPT) for this 1 percent or greater annual increase and sets the APT for total annual RPS-eligible procurement requirements. The first year in which PG&E, SCE, and SDG&E were subject to an APT and IPT was 2004.⁹ The first year ESPs were subject to an APT was 2006.¹⁰

CPUC Decision 06-10-050 (Rulemaking 06-05-027) determined that "any RPS-eligible procurement may be used to satisfy any portion of the APT." Further, any RPS-eligible procurement may be used to satisfy the IPT.¹¹ When a retail seller procures energy and the associated renewable and environmental attributes from a facility that is RPS-certified, then the procurement may count toward the retail seller's APT, including its IPT, assuming the transaction meets applicable delivery requirements and other eligibility criteria.¹² The Energy Commission verifies RPS procurement, and the CPUC

⁹ CPUC Decision 06-10-050, Rulemaking 06-05-027, *Opinion on Reporting and Compliance Methodology for Renewables Portfolio Standard Program*, October 19, 2006.

¹⁰ Public Utilities Code Section 399.12, Subdivision (h)(3). The CPUC is setting procurement targets for ESPs, CCAs, and multi-jurisdictional utilities. The CPUC defined targets for these entities in the *Interim Opinion*, Decision 06-10-019, Rulemaking 06-02-012, October 5, 2006. On July 26, 2007, Decision 06-10-019 was modified by Decision 07-07-025, Rulemaking 06-02-012, which changed the formula for calculating the baseline amounts of renewable energy for ESPs to be consistent with the formula adopted in Decision 07-03-046 for IOUs.

¹¹ The CPUC is refining its definitions and compliance rules through Rulemaking 06-02-012 and R.06-05-027.

¹² Under Public Utilities Code Section 399.16, Subdivision (a)(5) and (a)(6), RECs shall not be created for electricity generated under contract with a retail seller or a local publicly owned electric utility executed before January 1, 2005, unless the contract contains explicit terms and conditions specifying the ownership or disposition of those credits, and shall not be created for contracts with Qualifying Facilities

determines whether a retail seller is in compliance with its procurement targets, consistent with CPUC rules for flexible compliance.¹³

The Energy Commission's RPS certification identifies if a facility is RPS eligible. The methodology to account for and verify RPS-eligible procurement is discussed in this *Guidebook* under Section IV, Generation Tracking and Verification System.

B. Eligibility for the Renewables Portfolio Standard

The Energy Commission has determined that it is appropriate to define eligible renewable energy resources by renewable resource or fuel, rather than by the specific technology used. For certain eligible renewable energy resources, however, the law contains specific requirements, and the Energy Commission must consider both the resource or fuel and the technology to determine RPS eligibility.

To qualify as eligible for California's RPS, a generation facility must use one or more of the following renewable resources or fuels (see the *Overall Program Guidebook* for full definitions):

- Biodiesel
- Biomass
- Conduit hydroelectric
- Digester gas
- Fuel cells using renewable fuels
- Geothermal
- Hydroelectric incremental generation from efficiency improvements
- Landfill gas
- Municipal solid waste
- Ocean wave, ocean thermal, and tidal current
- Photovoltaic
- Small hydroelectric (30 megawatts or less)
- Solar thermal electric
- Wind

Table 1 summarizes the requirements for a facility to qualify for the RPS and provides information on the appropriate forms and additional required information to submit for facilities seeking RPS certification or pre-certification. The table does not reflect any additional requirements that may apply to facilities located out-of-state.

Facilities using hydroelectric or municipal solid waste (MSW) resources are subject to the additional resource or fuel-specific requirements described below. Also addressed

under the federal Public Utility Regulatory Policies Act executed after January 1, 2005. Deliveries under those contracts shall be tracked through WREGIS and automatically retired as counting toward the retail seller's baseline. This is discussed in the section on "Eligibility of Tradable RECs."

¹³ Public Utilities Code Section 399.14 (a)(2)(C).

below are requirements for photovoltaic facilities, as well as those for multi-fuel and other facilities that use a combination of fuels, including those that operate in part by using fossil fuels.

Please note that, in some cases, the criteria for RPS eligibility depend on the date that a facility begins commercial operations. If a facility shuts down and later recommences operations, it is subject to the eligibility requirements that apply to the original operation date. If a facility is repowered as provided in this *Guidebook*, however, its commercial operation date may be considered its repowering date. Alternatively, a facility that began commercial operations before September 26, 1996, and later repowered as provided in this *Guidebook*, may opt to use the date the facility began commercial operations if the facility is also seeking funding under the Energy Commission's Existing Renewable Facilities Program. Please see the *Existing Renewable Facilities Program Guidebook* for eligibility information. These facilities must also be RPS certified.

Table 1: Summary of Renewables Portfolio Standard Eligibility and Additional Required Information and Forms

NOTE: Either CEC-RPS-1A (certification) or CEC-RPS-1B (pre-certification) forms must be submitted for all eligible resources.

Resource	RPS Eligibility	Additional Required Information	Supplemental Form
Biodiesel (Derived from biomass or MSW Conversion)	Yes, with fuel restrictions	Submit additional required information regarding the feedstock used to derive biodiesel. Refer to Section III.	CEC-RPS-1A/B: S1
Biogas Injected into Natural Gas Pipeline	Yes, with fuel restrictions	Submit additional required information regarding the feedstock used to derive biogas. Refer to Sections II and III.	CEC-RPS-1A/B: S1
Biomass	Yes, with fuel restrictions	Yes, refer to Section III	CEC-RPS-1A/B: S1
Conduit Hydroelectric	Yes, with restrictions	Yes, refer to Section III	CEC-RPS-1A/B: S2
Digester Gas	Yes	N/A	CEC-RPS-1A/B: S1
Fuel Cell	Yes, only if renewable fuel is used	Submit material required for the feedstock or technology used for generation, if applicable. Refer to Section III.	Submit the supplemental form corresponding to the feedstock or technology used for generation, if applicable.
Geothermal	Yes	N/A	N/A
Incremental Hydroelectric	Yes, with restrictions	Yes, refer to Section III	CEC-RPS-1A/B: S2
Landfill Gas	Yes	N/A	CEC-RPS-1A/B: S1
MSW Combustion	Yes, with restrictions	Yes, refer to Section III	CEC-RPS-1A/B: S1
MSW Conversion	Yes, with fuel restrictions	Yes, refer to Section III	CEC-RPS-1A/B: S1
Ocean Thermal	Yes	N/A	N/A
Ocean Wave	Yes	N/A	N/A
Photovoltaic	Yes	N/A	N/A
Small Hydroelectric	Yes, with restrictions	Yes, refer to Section III	CEC-RPS-1A/B: S2
Solar Thermal	Yes	N/A	N/A
Tidal Current	Yes	N/A	N/A
Wind	Yes	N/A	N/A
Characterization			
Out-Of-State	Yes, with restrictions	Yes, refer to Section III	CEC-RPS-1A/B: S3
Repowered	Yes, with restrictions	Yes, refer to Section III	N/A

1. Biodiesel

The electricity produced from combusting biodiesel is eligible for the RPS if the biodiesel is derived from the following fuel sources and complies with the requirements for these fuel sources and multi-fuel technologies:

1. A biomass feedstock such as “agricultural crops and agricultural wastes and residues,” including but not limited to animal waste, remains and tallow, food waste, recycled cooking oil, and pure vegetable oil, and consistent with the applicable requirements for multi-fuel technologies (refer to the guidelines for biomass eligibility and for multi-fuel technologies below), or
2. An eligible “solid waste conversion” process using MSW and consistent with applicable requirements for multi-fuel technologies (refer to the guidelines for MSW eligibility and for multi-fuel technologies below).

The facility must also be located in California or satisfy the out-of-state eligibility requirements discussed later in this *Guidebook*.

In addition to the certification or pre-certification application, applicants for biodiesel facilities must complete a supplemental application form.

2. Biomass

The generation from a biomass facility is eligible for the RPS provided the facility uses a “biomass” fuel as defined in the *Overall Program Guidebook*.

If the facility is seeking RPS eligibility and funding under the Existing Renewable Facilities Program, its biomass fuel must be limited to the biomass fuels specified in the Existing Renewable Facilities Program Guidebook. Facilities receiving funding from the Existing Renewable Facilities Program that use fossil fuel must not exceed a *de minimus* amount annually for 100 percent of the generation to be eligible for funding from that program. For the Existing Renewable Facilities Program, *de minimus* is defined as 5 percent of all fuels used and measured on an annual total energy input basis (refer to the *Existing Renewable Facilities Program Guidebook* for further information about eligibility for funding).

In addition to the certification or pre-certification application, applicants for biomass facilities must complete a supplemental application form.

3. Hydroelectric Facilities

The RPS eligibility of small hydroelectric facilities, conduit hydroelectric facilities, and incremental generation from eligible efficiency improvements of hydroelectric facilities

regardless of their overall generating capacity are addressed separately in Subsections (a), (b) and (c), respectively.

With exceptions for eligible efficiency improvements, an RPS-eligible small hydroelectric facility or conduit hydroelectric facility must not exceed 30 megawatts (MW). However, the law allows such a facility to retain its RPS eligibility if efficiency improvements cause the facility to exceed 30 MW. The Energy Commission interprets the 30 MW size limit such that if a 30 MW small hydroelectric or conduit hydroelectric facility had an eligible 5 MW energy efficiency increase, energy from the 35 MW capacity would be RPS-eligible.

Under certain circumstances, the incremental generation from eligible efficiency improvements to a hydroelectric facility of any generating capacity may qualify for the RPS, although the generation net of the incremental increase does not qualify.¹⁴ For example, if a 50 MW hydro facility increased its capacity to 55 MW due to eligible energy efficiency measures, the incremental increase of 5 MW would qualify for the RPS, but the initial 50 MW would not qualify for the RPS because the original size of the facility exceeded 30 MW. Eligibility requirements for efficiency improvements are discussed at the end of this section.

In addition to the certification or pre-certification application, applicants for small hydroelectric facilities or conduit hydroelectric facilities with eligible incremental efficiency improvements must complete a supplemental application form and provide additional required information (see “Additional Required Information” section).

a. Small Hydroelectric (not conduit)

The RPS eligibility of small hydroelectric facilities depends in part on whether the facility was operational before or after January 1, 2006, and whether energy efficiency improvements were made after January 1, 2008.

- Pre-January 1, 2006 (Existing Facility): Generation from a small hydroelectric facility that commenced commercial operations before January 1, 2006, is eligible for the California RPS if the facility meets all of the following criteria:
 1. The facility is 30 MW or less, with an exception for eligible efficiency improvements made after January 1, 2008, as discussed below.
 2. The facility is located in-state or satisfies the out-of-state requirements.

¹⁴ Assembly Bill 809 (Chapter 684, Statutes of 2007) amended Section 399.12 of the Public Utilities Code and changed the definition of conduit hydroelectric facility, revised the RPS-eligibility requirements for small hydroelectric and conduit hydroelectric facilities, and added as RPS-eligible the incremental increase in electricity generation due to efficiency improvements, regardless of the electrical output of the facility.

3. The facility was under contract to, or owned by, a retail seller prior to January 1, 2006.
- Post-January 1, 2006 (New Facility): Generation from a small hydroelectric facility that commences commercial operations or is repowered on or after January 1, 2006, is eligible for the California RPS if the facility meets all of the following criteria:
 1. The facility is 30 MW or less, with an exception for eligible efficiency improvements made after January 1, 2008, as discussed below.
 2. The facility is located in-state or satisfies the out-of-state requirements.
 3. The facility does not “cause an adverse impact on instream beneficial uses or cause a change in the volume or timing of streamflow.”¹⁵

Eligible Efficiency Improvements: A small hydroelectric facility shall not lose its RPS eligibility if efficiency improvements undertaken after January 1, 2008, cause it to exceed 30 MW and “the efficiency improvements do not result in an adverse impact on instream beneficial uses or cause a change in the volume or timing of streamflow.”¹⁶ The entire generating capacity of the facility shall be RPS-eligible.

b. Conduit Hydroelectric

To be eligible for the RPS, a conduit hydroelectric facility must use for its generation only the hydroelectric potential of an existing pipe, ditch, flume, siphon, tunnel, canal, or other manmade conduit that is operated to distribute water for a beneficial use.¹⁷ A conduit hydroelectric facility may be considered a separate project even though the facility itself is part of a larger hydroelectric facility. The RPS eligibility requirements for conduit hydroelectric facilities depend in part on whether the facility was operational before or after January 1, 2006, and whether eligible energy efficiency improvements were made after January 1, 2008. A discussion of eligible efficiency improvements can be found at the end of this section.

- Pre-January 1, 2006 (Existing Facility): Generation from a conduit hydroelectric facility that commenced commercial operations before January 1, 2006, is eligible for the RPS if the facility meets all of the following criteria:
 1. The facility is 30 MW or less, with the exception of eligible efficiency improvements made after January 1, 2008, as discussed below.

¹⁵ Public Utilities Code Section 399.12(c)(1)(A).

¹⁶ Public Utilities Code Section 399.12.5(a)

¹⁷ “Beneficial use” shall be defined consistent with the California Code of Regulations, Title 23, Sections 659 through 672, to include the following uses of water: domestic use, irrigation use, power use, municipal use, mining use, industrial use, fish and wildlife preservation and enhancement use, aquaculture use, recreational use, and heat control use.

2. The facility is located in-state or satisfies the out-of-state requirements.
- Post-January 1, 2006 (New Facility): Generation from a conduit hydroelectric facility that commences commercial operations or is repowered on or after January 1, 2006, is eligible for the California RPS if the facility meets all of the following criteria:
 1. The facility is 30 MW or less, with the exception of eligible efficiency improvements made after January 1, 2008, as discussed below.
 2. The facility is located in-state or satisfies the out-of-state requirements.
 3. The facility does not cause an adverse impact on instream beneficial uses or cause a change in the volume or timing of streamflow.

Eligible Efficiency Improvements: A conduit hydroelectric facility shall not lose its RPS eligibility if efficiency improvements undertaken after January 1, 2008, cause it to exceed 30 MW and do not result in an adverse impact on instream beneficial uses or cause a change in the volume or timing of streamflow. The entire generating capacity of the facility shall be RPS-eligible.

A conduit hydroelectric facility may be associated with or part of a larger existing hydroelectric facility and separately certified as RPS eligible if the facility meets the following criteria:

1. The existing hydroelectric facility commenced commercial operations before January 1, 2006.
2. The conduit hydroelectric facility commenced commercial operations on or after January 1, 2006.
3. The existing hydroelectric facility and conduit hydroelectric facility are separately metered to identify their respective generation.

c. Incremental Hydroelectric Generation from Efficiency Improvements Regardless of Facility Output

The incremental increase in generation that results from efficiency improvements to a hydroelectric facility, regardless of the electrical output of the facility, is eligible for the RPS if ALL of the following conditions are met:

1. The facility was operational before January 1, 2007.
2. The efficiency improvements are initiated on or after January 1, 2008, are not the result of routine maintenance activities, and were not included in any resource plan sponsored by the facility owner before January 1, 2008.

3. The facility has, within the immediately preceding 15 years from the date the efficiency improvements are initiated, received certification from the State Water Resources Control Board (SWRCB) pursuant to Section 401 of the Clean Water Act (33 U.S.C. Sec. 1341), or has received certification from a regional board to which the SWRCB has delegated authority to issue certification, unless the facility is exempt from certification because there is no potential discharge into waters of the United States.
4. The incremental increase is the result of efficiency improvements from a retrofit, and the efficiency improvements do not result in an adverse impact on instream beneficial uses or cause a change in the volume or timing of streamflow.
5. All of the incremental increase in electricity generation resulting from the efficiency improvements must be demonstrated to result from a long-term financial commitment by the retail seller.¹⁸

Hydroelectric Facilities Located Within California

A new or repowered small hydroelectric facility, conduit hydroelectric facility or incremental generation from eligible efficiency improvements located within California, is NOT eligible for the RPS if it results in an adverse impact on instream beneficial uses or cause a change in the volume or timing of streamflow. A facility may have an adverse impact on the instream beneficial uses if it causes an adverse change in the chemical, physical, or biological characteristics of water, including a change in the volume, rate, timing, temperature, turbidity, or dissolved oxygen content of the stream water.

If a new or repowered small hydroelectric facility, conduit hydroelectric facility, or incremental generation from eligible efficiency improvements to a hydroelectric facility, can demonstrate that it can operate without adversely impacting the instream beneficial uses or causing a change in the volume or timing of streamflow, it may be eligible for the RPS.

Hydroelectric Facilities Located Outside California

A new or repowered small hydroelectric facility, conduit hydroelectric facility, or incremental generation from eligible efficiency improvements to a hydroelectric facility located outside California may be eligible for the RPS if it can demonstrate that it may operate without adversely impacting the instream beneficial uses or causing a change in the volume or timing of streamflow. A facility may have an adverse impact on the instream beneficial uses if it causes an adverse change in the chemical, physical, or biological characteristics of water, including a change in the volume, rate, timing, temperature, turbidity, or dissolved oxygen content of the stream water.

¹⁸ “Long-term financial commitment” means either new ownership investment in the facility by the retail seller or a new or renewed contract with a term of more than 10 years, which includes procurement of the incremental generation. [Public Utilities Code Section 399.12.5(b)(4).]

Eligible Efficiency Improvements

Eligible efficiency improvements to hydroelectric facilities are limited to those improvements that make more efficient use of the existing water resource and equipment, rather than increase the storage capacity or head of an existing water reservoir. Efficiency improvements do NOT include regular or routine maintenance activities. Eligible efficiency improvements may include the following measures:

- Rewinding or replacing the existing turbine generator.
- Replacing turbines.
- Computerizing control of turbines and generators to optimize regulation of flows for generation.

The applicant is responsible for showing that its facility qualifies for the RPS. Additional information required of applicants for small hydroelectric, conduit hydroelectric facilities and incremental generation regardless of output is discussed in the section on certification.

Pumped storage

A pumped storage hydroelectric facility may qualify for the RPS if: 1) the facility meets the eligibility requirements for small hydroelectric facilities, and 2) the electricity used to pump the water into the storage reservoir qualifies as RPS eligible. The amount of energy that may qualify for the RPS is the amount of electricity dispatched from the pumped storage facility.

Pumped storage facilities qualify for the RPS on the basis of the renewable electricity used for pumping water into the storage reservoir, but the storage facilities will not be certified for the RPS as separate or distinct renewable facilities. A facility certified as RPS-eligible may include an electricity storage device if it does not conflict with other RPS eligibility criteria.

4. Municipal Solid Waste

Applicants representing facilities using municipal solid waste (MSW) fall into two categories:

1. **Solid Waste Combustion Facilities:** A facility that directly combusts MSW to produce electricity is only eligible for the RPS if it is located in Stanislaus County and was operational before September 26, 1996. Applicants for combustion facilities must submit documentation to the Energy Commission demonstrating that the facilities meet these requirements.

2. Solid Waste Conversion Facilities: A facility is eligible for the RPS if 1) it uses a two-step process to create energy whereby in the first step (gasification conversion) a non-combustion thermal process that consumes no excess oxygen is used to convert MSW into a clean burning fuel, and then in the second step this clean burning fuel is used to generate electricity, 2) it is located in-state or satisfies the out-of-state requirements, and 3) it meets all of the following criteria in accordance with Public Resources Code Section 25741, Subdivision (b)(3):
 - a. The technology does not use air or oxygen in the conversion process, except ambient air to maintain temperature control.
 - b. The technology produces no discharges of air contaminants or emissions, including greenhouse gases as defined in Section 42801.1 of the Health and Safety Code.
 - c. The technology produces no discharges to surface or groundwaters of the state.
 - d. The technology produces no hazardous wastes.
 - e. As much as possible, the technology removes all recyclable materials and marketable green waste compostable materials from the solid waste stream before the conversion process, and the owner or operator of the facility certifies that those materials will be recycled or composted.
 - f. The facility at which the technology is used complies with all applicable laws, regulations, and ordinances.
 - g. The technology meets any other conditions established by the State Energy Resources Conservation and Development Commission (formal name of the Energy Commission).
 - h. The facility certifies that any local agency sending solid waste to the facility diverted at least 30 percent of all solid waste it collects through solid waste reduction, recycling, and composting.

In addition to the certification or pre-certification application, applicants for MSW facilities must complete the supplemental application form for Biofuels and provide additional required information (see “Additional Required Information” section).

5. Solar Energy and Distributed Generation

Generation from facilities using solar energy is technically eligible for the RPS. Solar thermal electric central station facilities delivering electricity to the grid are relatively straightforward to integrate into RPS implementation because the generation can be readily measured and procured toward meeting RPS requirements. A photovoltaic (PV)

central station facility could also produce electricity that is eligible for the RPS with standard metering employed for central station facilities.

Distributed generation PV facilities and other distributed renewable energy technologies, however, have qualities that make them more difficult than central station facilities to integrate into RPS implementation. For example, distributed PV facilities are typically small-scale applications designed to meet a consumer's on-site energy demands. In addition, generation from distributed generation PV may be metered differently than central station facilities or not metered at all.

Both the Energy Commission and the CPUC have roles in determining RPS implementation for distributed generation. In January 2007, the CPUC determined that owners of renewable distributed generation facilities could maintain ownership of the RECs attributed to their system's generation.¹⁹ However, the Energy Commission will not certify distributed generation PV and other forms of customer-sited renewable energy into the RPS at this time, with the following exception.

The Energy Commission will certify facilities that would have been considered distributed generation facilities except that they are participating in a standard contract/tariff executed pursuant to Public Utilities Code 399.20, as implemented through the CPUC Decision 07-07-027 (R.06.05.027), executed pursuant to a comparable standard contract/tariff approved by a local publicly owned electric utility (POU), or if the facility is owned by a utility and meets other requirements, to become certified as RPS-eligible. If the energy is sold under contract to a retail seller (or POU that may have a similar standard contract/tariff structure), then the energy sold may be RPS-eligible. To qualify as RPS-eligible, the facility must not receive (or have received or be planning to receive) benefits from the CPUC-approved Self Generation Incentive Program or California Solar Initiative, the Energy Commission's Emerging Renewables Program, New Solar Homes Partnership, or Pilot Performance Based Incentive Program, or any other similar ratepayer-funded program. Similarly, the facility must not receive or plan to receive benefit from net metering programs or net metering tariffs approved by the CPUC or any POU. If the facility is currently receiving benefits through net metering, it may apply for pre-certification and subsequently apply for certification once it has exited any net metering agreements.

The Energy Commission will not certify distributed generation facilities as RPS-eligible unless the CPUC authorizes tradable RECs to be applied toward the RPS. If the CPUC authorizes the use of tradable RECs, it may revisit the metering requirements for DG systems consistent with the measurement requirements adopted for grid connected renewable facilities and the Energy Commission's tracking system. Facilities that receive funding under the Energy Commission's New Solar Homes Partnership program, Emerging Renewables Program, or Pilot Performance-Based Incentive Program, under the CPUC-approved Self Generation Incentive Program or California Solar Initiative, or any similar ratepayer-funded program, and facilities that benefit from

¹⁹ Decision 07-01-018, Rulemaking 06-03-004, January 11, 2007.

net metering programs or tariffs approved by the CPUC or any POU, are considered distributed generation and may not be certified as RPS-eligible at this time.

6. Renewable Facilities Using Multiple Fuels

The Energy Commission will allow options for RPS-eligibility of renewable facilities that use multiple fuels or resources to generate electricity, such as co-fired fuels or a mix of fuels that includes fossil fuels. To count 100 percent of the electricity generated toward RPS obligations from such a multi-fuel facility, one of the following three conditions must be met.

1. If the annual fossil fuel use at the facility does NOT exceed a *de minimus* amount, then 100 percent of the electricity production from the facility may count as RPS-eligible. *De minimus* for facilities seeking RPS eligibility is 2 percent of all fuels used and measured on an annual total energy input basis. Note that *de minimus* for facilities seeking RPS eligibility and funding under the Energy Commission's Existing Renewable Facilities Program is 5 percent of all fuels used and measured on an annual energy input basis.
2. In the past, the Energy Commission's Renewable Energy Program provided that renewable facilities using fossil fuels were eligible for funding as long as the percentage of fossil fuel used did not exceed 25 percent of the total energy input of the facility during a given calendar year. The Energy Commission will provide the same treatment under the RPS for renewable facilities that commenced commercial operations before January 1, 2002, were certified and operational as a renewable qualifying small power production facility (QF) pursuant to the federal Public Utility Regulatory Policies Act before January 1, 2002, and are currently certified as a renewable QF facility.
3. Any facility that is developed and awarded a power purchase contract as a result of a 2002/2003 Interim RPS procurement solicitation approved by the CPUC under Decision 02-08-071 and Decision 02-10-062 may use up to 25 percent fossil fuel, measured on an annual total energy input basis, and count 100 percent of the electricity generated as RPS-eligible.

The Energy Commission may allow multi-fuel facilities that do not meet one of the above criteria to be certified as RPS-eligible, but only the renewable portion of their generation will count as RPS eligible, and only when the Energy Commission approves a method to measure the renewable portion. An applicant for RPS pre-certification or certification of such a facility must submit with its application for RPS pre-certification or certification a proposal for an appropriate method to measure the renewable fraction of the facility's generation. The measurement should be based on the total annual energy input of the fuels. The Energy Commission will evaluate and consider the proposed method as part of the facility's application for pre-certification or certification.

If a facility meets the above criteria, the Energy Commission will certify or pre-certify the facility as the fuel type of the renewable fuel used. For example, if a solar thermal electric facility is co-fired with natural gas (fossil fuel use must meet the criteria of the Public Utility Regulatory Policies Act [PURPA] including not to exceed 25 percent of the fuel use), then the facility will be certified as “solar thermal electric.” To participate in the RPS, the multi-fuel facility must be registered in the WREGIS accounting system and comply with WREGIS’ requirements, including those for metering, and for reporting and updating the renewable portion of the fuel mix.

- **Biogas Injected into a Natural Gas Pipeline**

RPS-eligible biogas (gas derived from RPS-eligible fuel such as biomass or digester gas) injected into a natural gas transportation pipeline system and delivered into California for use in an RPS-certified multi-fuel facility may result in the generation of RPS-eligible electricity. The biogas must meet strict heat content and quality requirements within a narrow band of tolerance to qualify as pipeline-grade gas.

Quantifying RPS-eligible energy production requires accurate metering of the volume of biogas injected into the transportation pipeline system and the measured heat content of the injected gas. Although blending the biogas into the transportation pipeline system mixes the biogas with other pipeline gas, natural gas regulations require gas entering the system to be “nominated” for use at a specific power plant or to a pipeline system owned by a publicly owned utility or other load-serving entity (LSE). Consequently, the amount and energy content of the biogas or other RPS-eligible gas produced can be measured and either nominated for use at a specific power plant or nominated to a pipeline system owned by an LSE. If the biogas is nominated to a pipeline system, the owner of the system must designate the facility in which the biogas will be used.

The operator of a facility to which biogas is nominated (or designated) must certify its facility as RPS-eligible, recognizing that the facility will use a blend of RPS-eligible and ineligible fuel.

The amount of RPS-eligible electricity produced shall be calculated by multiplying the generation of the facility (MWh) by the ratio of the biogas used and the total gas (biogas and natural gas) used by the facility. The electricity generated and gas used must be measured over an equal period (such as MWh produced per month and gas used per month).

Any production or acquisition of gas that is directly supplied to the gas transportation pipeline system and used to produce electricity may generate RPS-eligible electricity as follows:

1. The gas must be produced from an RPS-eligible resource, such as biomass or digester gas.

2. The gas must be injected into a natural gas pipeline system that is either within the WECC region or interconnected to a natural gas pipeline system in the WECC region that delivers gas into California.
3. The energy content produced and supplied to the transportation pipeline system must be measured on a monthly basis and reported annually, illustrated by month. Reporting shall be in units of energy (for example, MMBtu) based on metering of gas volume and adjustment for measured heat content per volume of each gas). In addition, the total amount of gas used at the RPS-eligible facility must be reported in the same units measured over the same period, and the electricity production must be reported in MWh.
4. The gas must be used at a facility that has been certified as RPS-eligible. As part of the application for certification, the applicant must attest that the RPS-eligible gas will be nominated to that facility or nominated to the LSE-owned pipeline serving the designated facility.
5. In its annual RPS Procurement Verification report, the Energy Commission will calculate the RPS-eligible energy produced using the same methodology discussed above.

When applying for RPS pre-certification, certification, or renewal, the application must include the following: (1) an attestation from the multi-fuel facility operator of its intent to procure biogas fuel that meets RPS eligibility criteria, and (2) an attestation from the fuel supplier that the fuel meets eligibility requirements.

In addition to the certification or pre-certification application, applicants for biogas facilities must complete a supplemental application form.

C. Out-of-State Facilities

This section applies to renewable facilities that are located out-of-state and have their first point of interconnection to the WECC transmission system outside the state, as defined in the *Overall Program Guidebook*. Facilities that have their first point of interconnection to the WECC transmission system within the state are considered to be in-state facilities and are not subject to the requirements of this section for RPS eligibility. Out-of-state facilities that are not or will not be interconnected to the WECC transmission system are not eligible for the RPS.

Note that the delivery requirements described here for out-of-state facilities do not apply to electric corporations that serve retail end-use customers outside California and have 60,000 or fewer customer accounts in California under Public Utilities Code Section 399.17. Section 399.17 modifies the definition of an eligible renewable energy resource to include out-of-state facilities for multi-jurisdictional electric corporations, such as PacifiCorp and Sierra Pacific Power Company, which serve customers both in and

outside California. This exception only applies to situations wherein these multi-jurisdictional utilities procure energy to meet their own RPS obligations. In the event that these facilities are located out-of-state and their generation is procured to meet the RPS targets of another retail seller, the facility would be subject to all out-of-state eligibility requirements, including delivery requirements.

Generation from renewable facilities located out-of-state is potentially eligible for the RPS. To qualify for the RPS, generation from an out-of-state facility must meet the RPS eligibility requirements described above and must satisfy all of the following criteria.

- a) Facility is located so that it is or will be connected to the WECC transmission system.
- b) Facility commences initial commercial operations on or after January 1, 2005.
- c) Retail seller or procurement entity of the procured generation demonstrates delivery of its generation to an in-state market hub or in-state location, as specified in the delivery requirements below.
- d) Facility does not cause or contribute to any violation of a California environmental quality standard or requirement within California.
- e) If located outside the United States, the facility is developed and operated in a manner that is as protective of the environment as would a similar facility be if it were located in California.
- f) Facility and retail seller participate in an RPS tracking and verification system approved by the Energy Commission.

If the facility meets all of the above criteria except it commenced commercial operations before January 1, 2005 (criterion “b” above), then it may be RPS-eligible if it meets one of the following two criteria:

- a) The electricity is from incremental generation resulting from project expansion or repowering of the facility on or after January 1, 2005, or
- b) The facility is part of a retail seller’s existing baseline procurement portfolio as identified by the CPUC.

Procurement by retail sellers that serve end-use customers outside California and have 60,000 or fewer customer accounts in California pursuant to Public Utilities Code Section 399.17, such as PacifiCorp and Sierra Pacific Power Company, that is counted toward meeting the RPS target of the purchasing utility (and subject to Public Utilities Code Section 399.17) is not subject to the above delivery requirements. In lieu of the above criteria, the energy procured must meet all of the following criteria to be eligible for the RPS:

- a) The generation must be procured by the retail seller subject to Public Utilities Code Section 399.17 on behalf of its California customers and not used to fulfill its renewable energy procurement requirements in other states or any other renewable energy retail claim.
- b) The facility is connected to the WECC.
- c) The facility and retail seller must participate in an RPS tracking and verification system approved by the Energy Commission.

In addition to the certification or pre-certification application, applicants for out-of-state facilities must complete a supplemental application form and provide additional required information (see “Additional Required Information” section).

D. Delivery Requirements

For RPS compliance, electricity is deemed delivered if it is either generated at a location within the state or is scheduled for consumption by California end-use retail customers as specified in Public Resources Code Section 25741, Subdivision (a). Consequently, electricity generated by facilities located in-state or having their first point of interconnection to the WECC transmission system in-state satisfies California RPS delivery requirements.

Electricity may be delivered into California at a different time than when the RPS-certified facility generated electricity, pursuant to Public Resources Code Section 25741, Subdivision (a). Further, the electricity delivered into California may be generated at a different location than that of the RPS-certified facility. In practical terms, out-of-state energy may be “firmed” or “shaped” within the calendar year. Firing and shaping refers to the process by which resources with variable delivery schedules may be backed up or supplemented with delivery from another source to meet customer load.^{20 21} For contracts that require CPUC approval, the Energy Commission will

²⁰ For further information refer to the CPUC staff white paper, *Renewable Energy Certificates and the California Renewables Portfolio Standard Program*, April 20, 2006, [www.cpuc.ca.gov/word_pdf/REPORT/55606.doc]

²¹ Below are examples of contracting structures that would meet the RPS-delivery requirements; these examples are not exhaustive, and other contracting structures could also qualify. These examples do not constitute tradable RECs or authorize tradable RECs for RPS compliance.

1. The facility could provide firming and shaping services. For example, the retail seller could enter into a power purchase agreement (PPA) with an RPS-eligible facility and, as part of the PPA, the facility would provide firming and shaping to deliver a firm or non-firm product into California.

2. A third party could provide firming and shaping services. For example: a retail seller could buy energy and RECs from an RPS-eligible facility and execute a second PPA to resell the energy from

provide written documentation addressing whether a proposed contract delivery structure would be eligible for the RPS. For details, see Section III, Certification Process, in this *Guidebook*.

To count generation from out-of-state facilities for RPS compliance, the RPS-certified facility must enter a power purchase agreement with a retail seller, procurement entity or third party, and a matching quantity of electricity must be delivered to an in-state market hub (also referred to as “zone”) or in-state point of delivery (also referred to as “node”) located within California.²² The retail seller or procurement entity and seller may negotiate which party is responsible for securing transmission, as necessary, at any point along the delivery path as long as the energy is delivered into California.

The retail seller or procurement entity may document delivery of electricity from any control area operator (also referred to as “balancing authority”) in the WECC transmission system outside California, and the delivered electricity may originate from a control area that is different from that in which the RPS-certified facility is located. The electricity delivery may occur through typical delivery arrangements, such as through wheeling across multiple control areas, and the delivery may occur at any delivery point into California.

The Energy Commission will compare the amount of RPS-eligible electricity generated by the RPS-eligible facility per calendar year with the amount of electricity delivered into California for the same calendar year and the lesser of the two amounts may be counted as RPS-eligible procurement (for more discussion see “verification of delivery”). The electricity generated and associated RECs from the RPS-certified facility must be procured through a power purchase agreement with the retail seller or procurement entity. The delivery of electricity to an in-state market hub or in-state point of delivery located within California must be made consistent with North American Electric Reliability Corporation (NERC) rules and documented with a NERC E-tag as described below.

The following deliverability requirements were developed in consultation with the California ISO. These requirements must be satisfied for an out-of-state facility to qualify for the RPS (with the exception noted above for retail sellers subject to Public Utilities

the RPS-eligible facility, but not the RECs, to a third party that provides firming and shaping services. Then, the third party could provide the retail seller with a firm schedule for delivery into California.

3. The retail seller could provide firming and shaping services. The retail seller could buy energy and RECs from an RPS-eligible facility, sell the energy back to the facility, and “match” the RECs with energy delivery into California from a second PPA and/or with imports under a pre-existing PPA.

²² Beginning January 1, 2008, it will be acceptable for an RPS-certified facility to sell power to a retail seller, procurement entity, or third party, pursuant to a PPA, and all such parties must use and be registered as account holders with WREGIS as part of RPS compliance. A third party’s participation in out-of-state transactions is contingent upon all parties to that transaction (third party, generator, load serving entity, and California ISO) participating in WREGIS to verify RPS compliance.

Code Section 399.17). The delivery requirements do not apply to facilities located outside California whose first point of interconnection to the WECC transmission system is located in California.

1. The retail seller, procurement entity, facility representative or third party must either (a) arrange for an interchange transaction with the California ISO to deliver the out-of-state facility's energy (or a matching amount of energy from another out-of-state source located within the WECC) to a point of delivery in California, or (b) arrange for an interchange transaction with another balancing authority outside California to deliver energy to the point of delivery in California. Under the policies of the NERC, the interchange transaction must be scheduled with what is commonly referred to as a "NERC E-Tag."
2. The Source identified on the NERC E-Tag may be a specific RPS-eligible facility registered as a unique source or may be any balancing authority located in the WECC outside California.
3. The RPS certification number of the facility or facilities (or RPS pre-certification number, in the case of local publicly owned electric utilities) that is/are engaged in a power purchase agreement with a retail seller, procurement entity or third party (or for a local publicly owned electric utility implementing these delivery requirements as part of compliance with its RPS), must be shown on the Miscellaneous field of the NERC E-Tag.
4. The facility must provide the Energy Commission with its NERC identification (Source point name)²³ if it registers as a unique source, or the Source point name of the balancing authority in which it is located when it applies for RPS certification. (Providing this information does not restrict the eligibility of using other balancing authorities outside California to deliver energy into California.)
5. The facility representative, retail seller, procurement entity or third party (or local publicly owned electric utility implementing these delivery requirements as part of compliance with its RPS) must request and receive acceptance of a NERC E-Tag between a balancing authority in California and any balancing authority located in the WECC outside of California.
6. On May 1 of each year (or the next business day), the retail seller, procurement entity or third party must submit an annual report to the Energy Commission documenting compliance with this NERC E-Tag requirement for the previous calendar year. The annual report to verify delivery from out-of-state must include the following NERC E-Tag information:

²³ The NERC identification is the Source point name, an alpha-numeric code the generator uses to identify itself when it registers with the Transmission Services Information Network (TSIN). Registration with TSIN is mandatory for participation in the NERC tagging system.

- a) The “Source” or “Point of Receipt” located outside California and within the WECC.
- b) The final “Point of Delivery” or load center in California known as the “sink.”
- c) The California RPS-certification number of the facility or facilities with which the delivered energy is being “matched.” The California RPS-certification number must be shown on the Miscellaneous field of the NERC E-Tag.
- d) The amount of electricity delivered per month.

Additionally, the applicable parties (the Generation Providing Entity and Load Service Entities) must agree to make available upon request documentation of the NERC E-Tags to the Energy Commission.

- 7. The facility must submit verification of its generation to the Energy Commission annually. Please refer to the section on the “Generation Tracking and Verification System.”

E. Eligibility of Tradable Renewable Energy Certificates or Credits

As noted in the section on “Outstanding Issues,” RECs traded separately from energy (tradable RECs) do not qualify for the California RPS at this time.²⁴ The law, however, authorizes the use of RECs for RPS procurement requirements once (1) the CPUC establishes rules for REC procurement and (2) the CPUC and Energy Commission conclude that the tracking system is operational, capable of independently verifying delivery of renewable energy to a retail seller and can assure that RECs are not double counted by any seller within the WECC.

Tradable RECs that in the future may be counted toward California’s RPS requirements may be created for electricity delivered from RPS-eligible resources to local publicly owned utilities, the California Independent System Operator, or a retail seller. RECs associated with energy delivered to publicly owned utilities may be certified by the Energy Commission as RPS-eligible if the Energy Commission determines that the publicly owned utility has satisfied certain conditions. For more information, see the section on “Publicly Owned Utilities” in this *Guidebook*.

No tradable RECs shall be created for electricity generated pursuant to any electricity purchase contract with a retail seller or a publicly owned utility executed before January 1, 2005, unless the contract contains explicit terms and conditions specifying the ownership or disposition of those RECs. Deliveries under those contracts will be

²⁴ The CPUC is examining the issues surrounding authorizing tradable RECs for RPS compliance in its rulemaking R.06-02-012.

tracked through WREGIS and automatically retired as counting toward the retail seller's baseline.

Similarly, no tradable RECs shall be created for contracts with QFs under the federal Public Utility Regulatory Policies Act executed after January 1, 2005. Deliveries of energy under these contracts will be tracked through WREGIS and will automatically be retired as counting toward a retail seller's RPS procurement requirement.

The Energy Commission will not allow electricity beyond a *de minimus* quantity of fossil fuel to result in the creation of a tradable REC. The energy input of an RPS-eligible facility may use fossil fuel for no more than 2 percent of its total annual fuel input (on a BTU basis), and the Energy Commission's tracking system will issue RECs for the facility's entire energy output. This provision will go into effect on January 1, 2008, when all generating facilities, retail sellers, procurement entities, and third parties participating in California's RPS must use and be registered as account holders with WREGIS as part of RPS compliance, with the exception of PG&E, SDG&E and SCE, which are required to register with and use WREGIS by May 1, 2008, as part of RPS compliance. See the "Tracking and Verification System" section for additional information.

As described above, however, the 2 percent *de minimus* provision will not apply to RPS eligible generation from the following since tradable RECs will not be issued for:

- Facilities under contract with a retail seller or a local publicly owned utility if the contract was executed before January 1, 2005, unless the contract specifies the ownership or disposition of those RECs, and
- QFs under contracts executed on or after January 1, 2005.

A REC shall be counted only once for compliance with the California RPS and may not be also used to count toward the regulatory requirements of any other state or to satisfy any other retail product claims. RPS-eligible facilities, publicly owned utilities, and retail sellers who enter tradable REC transactions for RPS compliance purposes must participate in the RPS tracking and verification system approved by the Energy Commission.

RECs will be certified for generation only from an RPS certified facility that is also eligible to generate tradable RECs. If the facility loses its RPS certification status, any RECs produced will not be RPS certified, effective upon the date the facility becomes ineligible for the RPS.

III. Certification Process

This section covers the process for pre-certification and certification of renewable facilities eligible for the RPS, including pre-approving contract delivery structures as RPS-eligible. This section also describes additional required information for renewable facilities using technologies that must meet special eligibility requirements. Although retail sellers are required to meet their annual procurement requirements with generation from RPS-certified facilities, the Energy Commission also certifies facilities as RPS-eligible if they serve a local publicly owned electric utility (POU), and encourages POUs to meet their RPS obligations with certified facilities. Also, the Energy Commission will pre-certify small hydroelectric facilities that intend to sell to a POU that would be otherwise eligible for certification except that the facility was owned by or under contract to a POU.

Electricity generation from a facility cannot be counted toward meeting a retail seller's RPS procurement requirement until the Energy Commission certifies the facility as a renewable supplier eligible for the RPS. Any facility operator interested in entering into a contract to generate electricity that will count toward a retail seller's RPS obligation must certify the facility with the Energy Commission.

Delivery from out-of-state facilities must meet specific delivery requirements, as previously noted, for the generation to qualify for the RPS. Retail sellers seeking pre-approval for out-of-state delivery may submit a schematic diagram with a narrative description of a proposed contract delivery structure to the CPUC as part of the retail seller's advice letter or application process for which contract approval is being requested. The CPUC staff will submit the documentation to the Energy Commission for review. If the Energy Commission staff determines that the proposed delivery structure meets the RPS delivery requirements, the staff will provide written documentation to the CPUC.

Procurement may count toward a retail seller's RPS obligation if the generating facility was RPS certified at the time of procurement or applied for RPS certification or pre-certification at the time of procurement. The electricity will not be considered eligible, however, and will not be counted toward meeting an RPS obligation until the facility is actually certified by the Energy Commission as being eligible for the RPS. Any generation that occurs before a facility is RPS-certified will be considered RPS-eligible only if the generation occurs on or after the date the Energy Commission receives an application for certification (CEC-RPS-1A) or pre-certification (CEC-RPS-1B). This applies to all facilities regardless of whether they previously registered with the Energy Commission's Renewable Energy Program.

In applying for certification, the facility operator, or the IOU on the operator's behalf, agrees to participate in the Energy Commission's generation tracking and verification system. For more information about the tracking and verification system, please refer to the section of this *Guidebook* titled "Generation Tracking and Verification System."

A. Applying for RPS Certification and Pre-Certification

Facilities seeking certification as eligible for the RPS consistent with the eligibility requirements noted above must submit a completed application, along with any necessary supporting documentation, to the Energy Commission at the address shown on the form. An application may be submitted for a facility by the facility operator or its agent on the facility's behalf (CEC-RPS-1A) or by the procuring retail seller on the operator's behalf (CEC-RPS-2) for facilities under contract with the retail seller before April 21, 2004, the initial adoption date of this *Guidebook*. A publicly owned electric utility, for its RPS program, may certify a facility on the operator's behalf using form CEC-RPS-2 for facilities under contract with the publicly owned electric utility and subject to the requirements applicable to retail sellers.

Except for CPUC-ordered extensions to existing QF power purchase contracts, retail seller certification on the operator's behalf becomes void in the event that the facility's contract with the retail seller expires, or is voluntarily extended, or is otherwise renegotiated by the retail seller and the facility operator. Once the contract expires or is voluntarily renegotiated, the facility operator must apply for certification from the Energy Commission on its own behalf, and the retail seller may not recertify the facility on the operator's behalf. For CPUC-ordered extensions, retail seller certification may continue until the extension expires.

The Energy Commission will review the application to determine eligibility as a renewable supplier eligible for the RPS and will notify applicants once a determination of eligibility is made.

Facilities certified by a retail seller will be granted certification only for the generation procured under contract by that retail seller. The facility operator must separately certify any facility capacity that is not subject to the retail seller's procurement contract but is procured to satisfy the RPS targets of another retail seller. If a facility operator seeks certification on its own behalf, however, the facility operator need submit only one application per facility regardless of whether generation from the facility is sold to one or multiple retail sellers.

When a retail seller applies on a facility's behalf, the retail seller must furnish all additional required information.

Provisional or "pre-certification" as an eligible renewable resource is available for applicants whose facilities are not yet on-line. Applicants seeking pre-certification must complete CEC-RPS-1B. The information submitted by these applicants will be subject to further verification once the pre-certified facility comes on-line. Applicants must indicate their desire to be pre-certified on their completed CEC-RPS-1B form and must submit all required supplemental information, as described below, to the extent that information is available. If the additional required information is not available at the time of pre-certification because of the facility's stage of development, then the applicant must

explain this in its application and identify the missing information and the date(s) when the information is expected to be available. Facilities that are pre-certified must submit a complete and updated certification application (CEC-RPS-1A) with all additional required information and be certified as RPS-eligible before any of its generation may be counted toward satisfying a retail seller's RPS procurement requirements.

The Energy Commission will make every effort to notify applicants if their facility is eligible for the RPS as soon as possible. For facilities that are not required to submit additional information as described below, the Energy Commission expects to review and process applications for certification and pre-certification within 10 business days of their receipt, unless questions or concerns arise regarding the applications. If questions arise, the applicant will be contacted and may be asked to submit additional information. If the applicant does not respond within 60 days to a request for clarification or additional information regarding the application, the application will expire without approval and be returned. The applicant must submit a new application with complete information to reinstate the certification request.

The Energy Commission will notify applicants in writing of its determination on the application for certification. If the application for certification or pre-certification is approved, the Energy Commission will issue a certificate stating that the facility is certified or pre-certified as eligible for the RPS. The certificate will list the Energy Commission-issued certification number for the facility as well as the size, fuel type and percentage of annual fossil fuel usage (if any), name, location, and owner/operator of the facility. The certificate will also indicate whether the facility was certified by the facility owner/operator or a retail seller on the owner/operator's behalf.

In addition, the certificate will identify any limits on certification or pre-certification. For example, a certificate issued for a facility that has been certified by a retail seller will indicate certification by the retail seller, rather than the facility operator, and will limit certification to the generation procured under contract by the retail seller. The certificate will not include an expiration date and will remain in effect for the life of the facility.

The Energy Commission encourages local publicly owned electric utilities to meet their RPS obligations through procurement from RPS-certified (or pre-certified) facilities. However, for a small hydro facility to become RPS-certified, it is eligible only if a retail seller owned or procured electricity from the facility as of January 1, 2006. By statute, the definition of a "retailer seller" excludes local publicly owned electric utilities. Consequently, a small hydro facility that is owned by or is selling its generation exclusively to a local publicly owned electric utility as of January 1, 2006, is not RPS eligible and may not apply for RPS certification but may apply for pre-certification.

Similarly, if an out-of-state facility commenced commercial operations after January 1, 2005, and the energy from the facility is not incremental generation resulting from project expansion or repowering AND was not part of a retail seller's baseline

because the energy was sold to (or the facility was owned by) a POU,²⁵ then the facility representative may apply for pre-certification. If the Energy Commission determines that the facility is eligible for pre-certification and is otherwise eligible for certification except that it was owned by or under contract to a publicly owned utility, then the Energy Commission will note this determination in the pre-certification notification upon an applicant's request.

For applicants that must submit additional required information, such as biofuels, hydroelectric, or out-of-state facilities, the Energy Commission must conduct an extensive review of the additional data. Review of these applications will require a minimum of 30 days from when the Energy Commission receives a complete application. The 30-day clock starts on the date a complete application is date-stamped by the Energy Commission as received and the Executive Director makes a determination on any related applications for confidential designation. After completing its review, the Energy Commission will either notify the applicant of its proposed determination or will request additional information from the applicant.

If the applicant disagrees with the Energy Commission's determination on a certification or pre-certification application, the applicant may petition the Renewables Committee and the Energy Commission for reconsideration as described in the *Overall Program Guidebook*.

The Energy Commission will post information on its website listing those facilities that are certified or pre-certified as eligible for the RPS. Any changes in a facility's certification status will also be posted on the Energy Commission's website.

Consistent with the *Overall Program Guidebook*, the Energy Commission may conduct periodic or random reviews to verify records submitted for certification or pre-certification as a renewable supplier eligible for the RPS. Further, the Energy Commission may conduct on-site audits and facility inspections to verify compliance with the requirements for certification or pre-certification. The Energy Commission may request additional information it deems necessary to monitor compliance with the certification requirements specified in this *Guidebook*.

To the extent that the facility's agent or a retail seller applies for certification on a facility's behalf, the agent or retail seller must secure and have available for inspection records to verify the application for certification or pre-certification. In addition, the agent or retail seller must possess documents to verify a facility's compliance with the requirements of certification and pre-certification. These documents must be available to the Energy Commission upon request for auditing purposes.

²⁵ Public Resources Code 25741(b)2(C). For further information on eligibility requirements refer to the section of this Guidebook titled, "Eligibility of Out-of-State Facilities."

B. Amending Certification and Pre-Certification

Representatives of certified and pre-certified facilities must notify the Energy Commission promptly of any changes in information previously submitted in an application for certification or pre-certification. A facility failing to do so risks losing its certification status. Any changes to a certification or pre-certification application should be reported on an amended CEC-RPS-1 form (CEC-RPS-1A to amend certification and CEC-RPS-1B to amend pre-certification). For example, if a facility's annual fossil fuel use changes from the percentage identified in its previous application for certification, the facility must submit an amended application. The Energy Commission will review the amended application and notify the applicant of any modifications to its certification status.

Also, any changes to the status of a facility's certification will be posted on the Energy Commission's website, and any affected retail seller contracting with that facility will be promptly notified.

C. Additional Required Information for Biofuels, Hydroelectric, and Out-of-State Facilities

The following instructions apply to applications for biofuels and hydroelectric facilities. Instructions are also included for applicants seeking certification or pre-certification of repowered facilities and facilities located outside California. The additional required information described below must be submitted as an attachment to the applicant's completed CEC-RPS-1A or CEC-RPS-1B form, along with the appropriate supplement form, if applicable.

1. Instructions for Additional Required Information for Hydroelectric Facilities

An applicant must provide additional information to substantiate its self-certification that a small hydroelectric facility, conduit hydroelectric facility, or incremental generation from efficiency improvements to hydroelectric facilities regardless of overall facility size is eligible for the RPS if the facility:

- Commenced commercial operations or was repowered on or after January 1, 2006, for small or conduit hydroelectric facilities.
- Commenced commercial operations before January 1, 2007, for incremental generation from efficiency improvements regardless of facility size..
- Was added to an existing water conduit on or after January 1, 2006, for conduit hydroelectric facilities.
- Was an existing small hydro or conduit hydro facility and made efficiency improvements after January 1, 2008 that caused it to exceed 30 MW.

Additional required water-use data and documentation described below must be attached to a completed CEC-RPS-1A (for certification) or CEC-RPS-1B (for pre-certification) form. These requirements apply to facilities located within California as well as those located out-of-state. Applicants possessing a permit or license from the State Water Resources Control Board (SWRCB) – or from another governing body, if located out-of-state – must submit a copy of the permit or license as well as the application for the permit or license.

1. Name of the Facility
2. Ownership of the Facility
3. Source Water Description

The application must identify the source of the water for the hydroelectric project. The source must be characterized as surface, groundwater, or other (for example, recycled water). For surface water sources, a map at a scale of 1:24,000 must be provided. The map should also identify the location of the diversion point and all other facilities. In addition, a written description of the location of the diversion should be provided (county and nearest city) as well as the name of the body of water at the point of diversion. For groundwater, the location of the well(s) and conveyance facilities shall be identified on a map of 1:24,000 scale. The applicant must also specify how much water is used for each of the identified beneficial uses.

4. Water Rights

Both in-state and out-of-state applicants must clearly establish their right to divert water by submitting all necessary information as well as all appropriate licenses or permits. Within California, this information must identify the permitted volume, rate, and timing of water diversions, the place of diversion, and beneficial uses. This may be achieved through submittal of the appropriate SWRCB appropriation permit or license, or the Statement of Water Diversion and Use filed with SWRCB. For diversions not subject to an appropriation permit or license, a copy of any Statement of Water Diversion and Use filed with SWRCB should be provided. Out-of-state facilities must provide similar documentation of an existing water right for the water diversion of the project.

5. Hydrologic Data

The applicant must submit appropriation and/or diversion data for the last five years or for the period of operation if the project has been operating less than five years. Information contained in any legally required reports may be used to meet this requirement if sufficient information is included in the report. For other projects, the hydrologic data submitted must be accompanied by a description of how the data is collected. Flow data shall be provided at the frequency set forth in the applicable water appropriation permit; for example, if the permit specifies minimum and maximum flows on a monthly basis that is the level of information necessary to be submitted.

6. Other Permits

The applicant must submit all other applicable permits, including those permits and exemptions issued by the Federal Energy Regulatory Commission (FERC).

7. Environmental Documentation

The applicant must submit copies of any permits, agreements, contracts, or other requirements affecting the operation of the facility, especially those that affect the volume, rate, timing, temperature, turbidity, and dissolved oxygen content of the stream water before and after the points of diversion.

8. Capacity

For small and conduit hydroelectric facilities, the applicant must demonstrate how the project will comply with the 30 MW size limitations under the RPS and not cause an adverse impact on instream beneficial uses or a change in the volume or timing of streamflow. For this purpose, a facility may have an adverse impact on the instream beneficial uses if it causes an adverse change in the chemical, physical, or biological characteristics of water.

9. Efficiency Improvements

Applicants seeking certification of small or conduit hydroelectric facilities that exceed 30 MW due to efficiency improvements are required to provide the following:

- a) Documentation that shows when the existing small or conduit hydroelectric facility commenced commercial operations.
- b) Documentation that describes the efficiency improvements and when they were initiated and completed. .
- c) Documentation that demonstrates that the efficiency improvements are not the result of routine maintenance
- d) Documentation that demonstrates that the efficiency improvements did not result in an adverse impact on instream beneficial uses or cause a change in the volume or timing of streamflow. For this purpose, an efficiency improvement may have an adverse impact on the instream beneficial uses if it causes an adverse change in the chemical, physical, or biological characteristics of water.

Applicants seeking certification of incremental hydroelectric generation due to efficiency improvements regardless of facility output are required to provide the following:

- a) Documentation that shows when the existing hydroelectric facility commenced commercial operations.
- b) Documentation that describes the efficiency improvements and when they were initiated and completed.
- c) Documentation that demonstrates that the efficiency improvements are not the result of routine maintenance.
- d) Documentation that demonstrates that the efficiency improvements were not included in any resource plan sponsored by the facility owner before January 1, 2008. An example of this documentation is submission of pertinent sections of such a resource plan.
- e) A copy of certification from the State Water Resources Control Board (SWRCB) pursuant to Section 401 of the Clean Water Act (33 U.S.C. Sec. 1341) or the certification from a regional board to which the SWRCB has delegated authority to issue certification, unless the facility is exempt from certification because there is no potential discharge into waters of the United States. The certification must have been received within the immediately preceding 15 years of when the improvements were initiated.
- f) Documentation that demonstrates that the efficiency improvements did not result in an adverse impact on instream beneficial uses or cause a change in the volume or timing of streamflow. For this purpose, an efficiency improvement may have an adverse impact on the instream beneficial uses if it causes an adverse change in the chemical, physical, or biological characteristics of water.
- g) Documentation that demonstrates evidence that the efficiency improvements to the facility resulted from a long-term financial commitment by the retail seller.²⁶
- h) A calculation of the historical average annual production of the existing hydroelectric facility, including verifiable generation data for the 20 years preceding the efficiency improvements (if the facility has not been operating 20 years, then provide data for the years it has been operational), including supporting water flow data.
- i) The actual or expected efficiency improvement and increase in production in MWh resulting from the efficiency improvement and a discussion of the method used to estimate increased energy production. The actual or expected efficiency improvement should be based on the same data that is used to calculate the historical average annual production of the existing hydroelectric facility. If production data are available for years following the efficiency improvement, please provide those data.

²⁶ "Long-term financial commitment" means either new ownership investment in the facility by the retail seller or a new or renewed contract with a term of more than 10 years, which includes procurement of the incremental generation.

2. Instructions for Additional Required Information for Municipal Solid Waste Conversion Facilities

Applicants for certification of solid waste conversion facilities must provide copies of permits issued by the California Integrated Waste Management Board (CIWMB) attached to the completed CEC-RPS-1A or CEC-RPS-1B form to verify compliance with the requirements specified above. Applicants seeking pre-certification must attach copies of their application to CIWMB for a permit. The Energy Commission will verify compliance in consultation with the CIWMB and based on CIWMB's proposed or adopted regulations for solid waste conversion technologies as set forth in Title 14, California Code of Regulations, Division 7, Chapter 3, Article 6.0, commencing with Section 17400. CIWMB is considering regulations for this purpose under Assembly Bill 2770 (Mathews, Chapter 704, Statutes of 2002), which establishes requirements for solid waste conversion technologies that mirror the requirements for these technologies found in Public Resources Code Section 25741, Subdivision (b)(3). The regulations being considered are part of CIWMB's Transfer/Processing Operations and Facilities Regulatory Requirements and will require facilities using solid waste conversion technologies to obtain a Conversion Technology Facility Permit. Pending the adoption of these regulations, the CIWMB may permit facilities using solid waste conversion technologies on a case-by-case basis following its existing regulations for the Transfer/Processing Operations and Facilities Regulatory Requirements.

To become certified as a renewable energy resource eligible for RPS, an applicant for a solid waste conversion facility must submit to the Energy Commission a copy of its Conversion Technology Facility Permit approved by the CIWMB. In the event that CIWMB's regulations for solid waste conversion technologies are not adopted at the time the facility seeks RPS certification, the facility must request and obtain from CIWMB a Solid Waste Facility Permit under CIWMB's existing regulations for the Transfer/Processing Operations and Facilities Regulatory Requirements. The Energy Commission will confirm that the permit is approved, active, and applicable to the facility seeking RPS certification. These permits must demonstrate the following:

1. The facility is using only a "gasification" conversion technology, as defined in Public Resources Code Section 40117.
2. The facility accepts and processes "solid waste" as defined in Public Resources Code Section 40191 and is not limited to receiving and processing "source separated" waste as defined in Title 14, California Code of Regulations, Section 17402.5(b)(4).
3. The facility processes solid waste from which, as much as possible, all recyclable materials and marketable green waste compostable materials have been removed before the solid waste conversion process.

In addition, an applicant must certify to the Energy Commission the following:

1. All recyclable materials and marketable green waste compostable materials that have been removed from solid waste delivered to the facility are recycled or composted.
2. Any local agency sending solid waste to the facility diverted at least 30 percent of all solid waste it collects through solid waste reduction, recycling, and composting. For purposes of this certification, "local agency" means any city, county, or special district, or subdivision thereof, that is authorized to provide solid waste handling services.

To become pre-certified as RPS-eligible, the applicant must submit to the Energy Commission the information required to receive a Conversion Technology Facility Permit from CIWMB. In the event CIWMB's regulations for solid waste conversion technologies have not been adopted at that time, then the applicant must submit to the Energy Commission the information required to receive a Solid Waste Facility Permit. This information is identified in Title 14, California Code of Regulations, Sections 18221.5 and 18221.6. The Energy Commission will review this information and consult with the CIWMB to determine if the information is complete and satisfies the requirements specified in Public Resources Code Section 25741(a)(3).

If a pre-certified applicant does not obtain a Conversion Technology Facility Permit from CIWMB by the time the project commences commercial operation, or if it is denied approval for a permit, the Energy Commission will revoke the applicant's pre-certification.

3. Instructions for Additional Required Information for Out-of-State Facilities

All out-of-state facilities must provide additional required information when applying for certification as RPS-eligible. Further reporting requirements apply to facilities that commenced commercial operations before January 1, 2005, as described below. However, the additional reporting requirements for out-of-state facilities do not apply, to a facility that is either:

- Exclusively serving retail sellers subject to Public Utilities Code Section 399.17, or
 - Seeking pre-certification and is not yet on-line.
1. Out-of-State Facilities: Representatives of all other out-of-state facilities seeking certification as RPS-eligible must submit the following additional information with a completed CEC-RPS-1A form or CEC-RPS-1B form.
 - Impact on California Environmental Quality Standards: The law requires a facility located out-of-state to demonstrate that it will not cause or contribute to a violation of

a California environmental standard or regulation.²⁷ To meet this criteria, the applicant must provide:

- a) A comprehensive list and description of all California environmental quality laws, ordinances, regulations, and standards (collectively referred to as “LORS”) that may be directly or indirectly violated by the facility’s development or operation, and
- b) An assessment as to whether the facility’s development or operation will cause or contribute to a violation of any of these LORS in the region of California most likely to be affected by the facility’s development or operation.

At a minimum, the LORS described shall address the following environmental areas consistent with Appendix B, Section (g), of the Energy Commission’s regulations for power plant certification, Title 20, California Code of Regulations, Sections 1701, et seq:

- Cultural Resources
- Land Use
- Traffic and Transportation
- Visual Resources
- Socioeconomics
- Air Quality
- Public Health
- Hazardous Materials Handling
- Workers’ Safety
- Waste Management
- Biological Resources
- Water Resources
- Agriculture and Soil
- Paleontologic Resources
- Geological Hazards and Resources
- Transmission System Safety and Nuisance

The applicable LORS for a given facility will vary depending on the facility’s location, since the LORS across California vary. For example, the air quality standards in Southern California may differ from the air quality standards in Northern California. Accordingly, for demonstrating whether the out-of-state facility will cause or contribute to a violation of any of these LORS in California, the applicant should select the region in California that would most likely be affected by the facility’s development or operation.

As noted above, further reporting requirements apply to out-of-state facilities that commenced commercial operations before January 1, 2005. For such facilities, the applicant may qualify for RPS certification if either: 1) the facility was part of a retail seller’s baseline, or 2) the facility produces incremental generation due to project

²⁷ Public Resources Code Section 25741(b)(2)(B)(iv)

expansion or repowering on or after January 1, 2005. The additional required information needed for each case is described below.

1. Baseline: If an out-of-state facility commenced commercial operations before January 1, 2005, the applicant must identify the retail seller that procured electricity from the facility, the baseline year, and the amount sold to the retail seller.

2. Incremental generation: The Energy Commission may certify incremental generation from out-of-state facilities as RPS-eligible if it finds that the incremental generation exceeds the project's historical production. The method for quantifying incremental generation is described in the "Generation Tracking and Verification System" section of this *Guidebook*. The applicant must provide the following information:

- For small hydroelectric or conduit hydroelectric facilities, the applicant must provide verifiable generation data for the 20 years preceding project expansion or repowering. If the project has not been operational for 20 years, then provide generation data on all previous years to date. The applicant must also provide the information described in "Additional Required Instructions for Small Hydroelectric or Conduit Hydroelectric Facilities."
- For all RPS-eligible technologies except small hydroelectric or conduit hydroelectric, the applicant must provide data on annual generation for the 36 months preceding the project expansion or repowering (for example, if the project expansion comes on-line January 1, 2007, then generation data must be provided from January 1, 2004 through 2006). If the project has not been operational for 36 months, then provide generation data for all previous months to date.
- All applicants seeking certification of incremental generation must provide evidence that the incremental generation from the facility resulted (or will result if the applicant is seeking pre-certification) from a capital expenditure in the project. This information is needed to verify that the incremental production is not a result of weather fluctuations or some other recurring or random event. The capital investment must exclude monies that would have been spent on operation and maintenance in the normal course of doing business. The applicant must provide a brief description of each capital investment made for project expansion or repowering, including a discussion of the nature of the capital investments and how they resulted in the incremental generation. In substantiating an application to certify incremental production, the burden of proof will be on the applicant to submit compelling evidence to demonstrate the effect that capital expenditures had on production.

All data submitted are expected to be public. However, the Energy Commission is interested only in data with a direct bearing on the application. For example, although information on capital investments and the resulting production increases is

expected to be submitted publicly, the Energy Commission has no interest in any proprietary underlying economic analyses that may have led to the decision to make such an investment.

2. **Out-of-Country Facilities:** In addition to the above information, an applicant for a facility located outside the United States must provide all of the following:
 - A comprehensive list and description of all California environmental quality LORS that would apply to a similar facility located within California at a site designated by the applicant.
 - An assessment as to whether the facility's development or operation will cause or contribute to a violation of any of these LORS. The applicant may select any region in California to demonstrate whether the facility's development or operation will cause or contribute to a violation of any of the LORS in California.
 - An explanation as to how the facility's developer and/or operator will protect the environment to the same extent as provided by these LORS for a similar facility located in California in developing or operating the facility, including whether the developer and/or operator will secure and put in place mitigation measures to ensure that these LORS are followed.

4. Instructions for Additional Required Information for Repowered Facilities

To apply for certification or pre-certification as a repowered facility, an applicant must submit a completed CEC-RPS-1A or CEC-RPS-1B form, along with documentation confirming the replacement of the facility's prime generating equipment and the capital investments made to repower the facility as well as the value of those investments.

1. **Prime Generating Equipment:** The applicant must document that the facility's prime generating equipment is new and that the repowered facility re-entered commercial operations on or after January 1, 2005. Applicants for repowered small hydroelectric facilities and conduit hydroelectric facilities must document the facilities re-entered commercial operations on or after January 1, 2006.
 - a. The "prime generating equipment" for each renewable resource is defined as follows:
 - **Wind:** the entire wind turbine, including the generator, gearbox (if any), nacelle, and blades.
 - **Biomass:** the entire boiler. Stoker boilers may be replaced with boilers using improved stoker technology or fluidized bed technology.

- Geothermal: the entire steam generator, including the turbine rotors, shaft, stationary blades, and any gear assemblies.
 - Small hydroelectric: the entire turbine and structures supporting the turbine.
 - Solid waste conversion: the entire gasifier (gasifying equipment) and combustion turbine.
 - Landfill gas: the entire internal combustion engine or combustion turbine as applicable.
 - Digester gas: the entire digester unit and internal combustion engine or combustion turbine as applicable.
 - Solar thermal: the entire steam turbine.
- b. All prime generating equipment at the facility must be replaced with new equipment for the facility to qualify as a repowered facility. For example, a 25 MW wind facility consisting of 50 separate wind turbines must at a minimum replace each of the 50 wind turbines with new turbines of like or greater capacity for the entire 25 MW facility to qualify as a repowered facility. The Energy Commission recognizes that a wind facility owner may want or need to repower only a portion of the turbines owned at a site and does not exclude that option. In the event that a generator is interested in repowering a portion of a site, then it will need to re-certify the remaining portion of the site that is not being repowered.
2. Capital Investments: The applicant must document that the value of the capital investment made to repower the facility equals at least 80 percent of the total value of the repowered facility. In addition, the applicant must document that capital investments were made not more than two years before the date that the facility re-entered commercial operations. Capital investments may only be considered for meeting the 80 percent threshold if they were made for that portion of the facility that contributes directly to the production of electricity. This includes the prime generating equipment as well as the electricity generators and related equipment, fuel processing, enhancing, and delivery equipment, control equipment, and structures used to structurally support the aforementioned equipment. As discussed below, the electrical generators, fuel processing, enhancing and delivery equipment, control equipment, and related structures do not need to be replaced for the facility to qualify as a repower. However, if this equipment is replaced, the capital investment to do so may be considered for toward meeting the 80 percent threshold.
- Electrical Generators and/or Fuel Processing, Enhancing, and Delivery Equipment: It is generally not necessary for a facility to replace its existing electrical generators or fuel processing, enhancing, and delivery equipment because replacing this equipment may produce little or no improvement to the facility's efficiency and, therefore, does not warrant the additional expense.

Exceptions are cases in which the electrical generator is an integral part of the prime generating equipment, such as for wind facilities, or where the fuel processing, enhancing, and delivery equipment is an integral part of the prime generating equipment via the fuel conversion process, such as for solid waste conversion facilities and digester gas facilities. The facility's environmental control equipment, such as air pollution control equipment, would not be considered toward meeting the 80 percent threshold, because such equipment does not contribute directly to electricity production.

- Any associated process control equipment and structures used for structural support of the prime generating equipment, electrical generators, fuel processing, enhancing, and delivery equipment, and associated process control equipment, as appropriate, would also fall into this category and are generally not necessary to replace.

The applicant must provide documentation, such as invoice receipts, verifying the replacement of the old equipment, as well as other components of the technology relevant to the repowering application. The Energy Commission will confirm that the equipment listed is appropriate for certification as a repowered facility.

The applicant must document the value of the capital investments made to the facility and the total value of the repowered facility. The value of the capital investments must equal at least 80 percent of the total value of the repowered facility.

The "repowered facility" is defined as all of the new and/or existing prime generating equipment, electrical generators, fuel processing, enhancing, and delivery equipment, and any associated process control equipment and structures at the facility. The land on which the facility sits will not be considered part of the repowered facility for purposes of determining the 80 percent threshold. Similarly, intangibles such as the value of a facility's power purchase contract or its goodwill will not be considered part of the repowered facility.

The applicant may show that it has met the 80 percent threshold by submitting either tax records or an assessment of the "replacement value" of the facility along with documentation of the cost of the new equipment. The applicant must notify the Energy Commission which methodology it is using and provide the appropriate information as described below.

a. Tax Records Methodology:

The applicant must submit to the Energy Commission all relevant tax records needed to demonstrate that the capital investments made to repower the facility are equal to at least 80 percent of the value of the repowered facility.

- The applicant must document the value of the capital investments and the year the investments were made. In this case, the value of capital investments is the original tax “basis” declared to the Internal Revenue Service to calculate depreciation. The tax basis should reflect the value of the equipment the applicant has attested to purchasing. The tax basis is generally what a business pays for an item to be depreciated.
- The applicant must document the value of the repowered facility. In this case, the value of the repowered facility is based on the sum of the tax basis declared for all of the equipment and structures in the repowered facility as of the year the facility is repowered. For new equipment and structures, the value of the repowered facility is the original tax basis; for existing equipment and structures, the value of the repowered facility is the tax basis as adjusted for depreciation. For facilities financed using a sale/lease-back or similar structure, the original tax basis of the equipment and structures for both the lessor and lessee will be considered.
- The applicant must divide the total value of capital investments by the total value of the repowered facility. This calculation must show that the investment is equal to or greater than 80 percent of the total value of the facility for it to qualify as repowered.

b. Replacement Value Methodology:

This alternative approach may make it more difficult for a facility to meet the 80 percent repowering threshold, but it is a reasonable alternative for parties who are unable or unwilling to secure the necessary tax records to use the adjusted tax basis approach.

- The applicant must document the value of the equipment replaced in the facility. The replacement cost of new equipment is based on the equipment’s purchase price and, consequently, is the same value when compared to the adjusted tax basis approach.
- The applicant must submit an independent evaluation of the replacement cost of existing, unreplaced equipment (“retained equipment”). The evaluation should be an estimate of the capital costs that would have to be incurred to replace the retained equipment. This estimate must be provided by an accountant in good standing with the American Institute of Certified Public Accountants or a member in good standing and certified as an internal auditor with the Institute of Internal Audits.
- The applicant must divide the total value of capital investments by the sum of the replacement cost of the new equipment and the independent estimate of the replacement cost of the retained equipment. This calculation must show that the

investment is equal to or greater than 80 percent of the total value of the facility for it to qualify as repowered.

IV. Generation Tracking and Verification System

The Energy Commission is responsible for developing a tracking system to verify compliance with the RPS. The Energy Commission is required to:

Design and implement an accounting system to verify compliance with the renewables portfolio standard by retail sellers, to ensure that electricity generated by an eligible renewable energy resource is counted only once for the purpose of meeting the renewables portfolio standard of this state or any other state, to certify renewable energy certificates produced by eligible renewable energy resources, and to verify retail product claims in this state or any other state. In establishing the guidelines governing this accounting system, the Energy Commission shall collect data from electricity market participants that it deems necessary to verify compliance of retail sellers, in accordance with the requirements of this article and the California Public Records Act (Chapter 3.5 [commencing with Section 6250] of Division 7 of Title 1 of the Government Code). In seeking data from electrical corporations, the Energy Commission shall request data from the [California Public Utilities] commission.²⁸

The CPUC may authorize the use of tradable RECs to satisfy the requirements of the RPS and may limit the quantity that may be procured separately from the underlying electricity generation by any retail seller to satisfy its RPS requirements. RECs may not be used to satisfy RPS procurement requirements, however, until such rules are established and not until the Energy Commission and the CPUC conclude that the Energy Commission's tracking system is "...operational, is capable of independently verifying the electricity generated by an eligible renewable energy resource and delivered to the retail seller, and can ensure that renewable energy certificates shall not be double counted by any seller of electricity within the service territory of the Western Electricity Coordinating Council (WECC)."²⁹

The Energy Commission developed WREGIS, an electronic tracking system to meet its tracking requirements, including the tracking of RECs, which was launched in June 2007. WREGIS issues a REC, termed a WREGIS Certificate, for each reported megawatt-hour of eligible generation. WREGIS Certificates document the amount of energy generated by facilities certified as RPS-eligible by the Energy Commission.

The Energy Commission used an interim generation tracking system to verify RPS procurement through 2007. The interim tracking system is based on data collected from various self-reported sources to verify procurement.

²⁸ Public Utilities Code, Section 399.13, Subdivision (b)

²⁹ Public Utilities Code, Section 399.16, Subdivision (a)(1)

