



2019 California RPS Annual Report Update

for the CA Forest Biomass Working Group



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November 20, 2019





Agenda

- RPS Program Background
- The 2019 RPS Annual Report
- RPS Bioenergy Procurement Programs





RPS Program Background

- The Renewable Portfolio Standards program is a market-based program that requires all California load-serving entities to procure increasing proportions of renewable energy.

$$\text{RPS \%} = \frac{\text{Renewable Energy Procurement (MWh)}}{\text{Retail Sales (MWh)}}$$

1 Renewable Energy Credit (REC) = 1 MWh of RPS-eligible electricity.

- CPUC jointly administers the program with the CEC first verifying before CPUC compliance review.
 - CPUC oversees procurement planning and compliance for Investor Owned Utilities, Community Choice Aggregation, Small and Multi-jurisdictional Utilities, and Electric Service Providers.





RPS Program Background

- RPS Requirements: Senate Bill 100 requires at least 60% RPS for total retail sales by 2030
- Long Term Contracting Requirement: retail sellers are required to procure 65% of their RPS requirements from long term contracts for Compliance Period 2021-2024
- Portfolio Content Categories (PCC)
 - Three categories define all renewable procurement acquired from contracts executed after June 1, 2010
 - Required 75% minimum of renewable procurement must be Category 1 – “bundled renewable energy credits (RECs) from facilities with a first-point of interconnection within a CA Balancing Authority, or facilities that schedule electricity into a CBA on an hourly or sub-hourly basis.





RPS Program Background

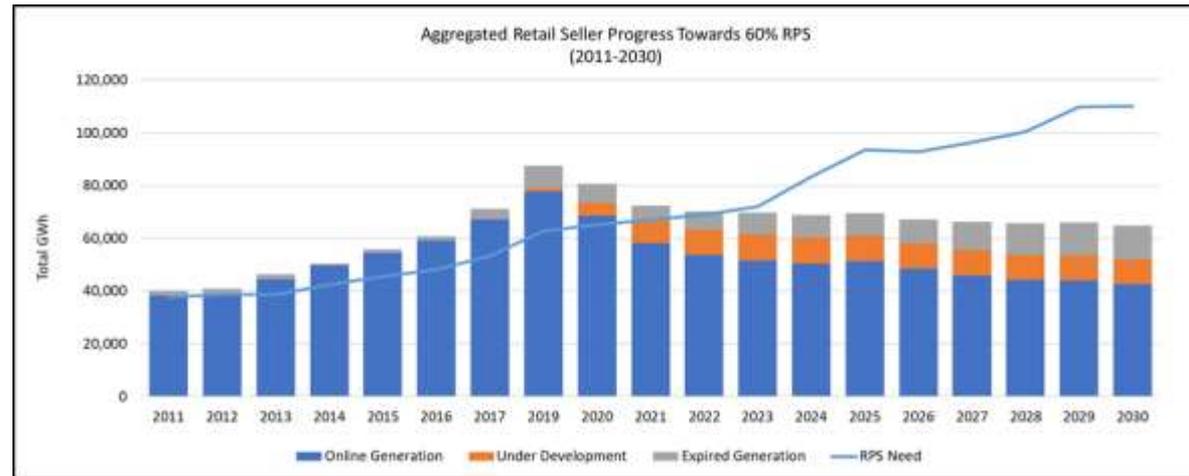
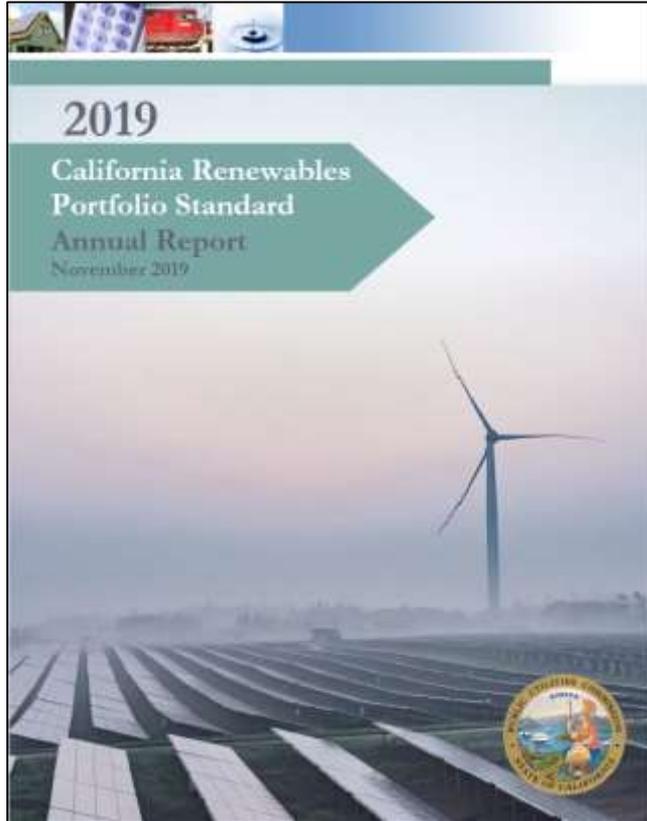
Two procurement mechanisms within the CPUC's RPS program are focused on bioenergy and, specifically, target qualifying fuel from forests:

- Bioenergy Market Adjusting Tariff (BioMAT)
- Bioenergy Renewable Auction Mechanism





2019 RPS Annual Report



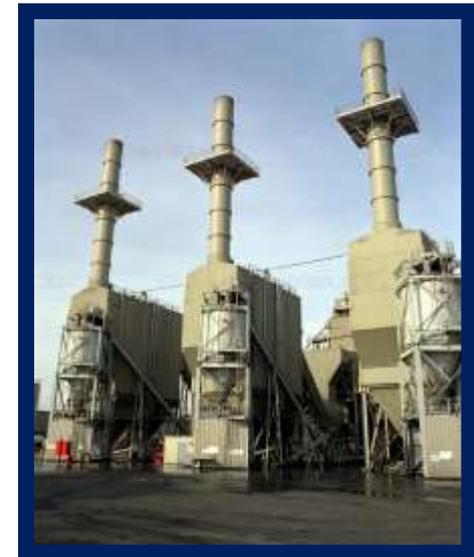
https://www.cpuc.ca.gov/RPS_Reports_Data/





Bioenergy Overview

- CPUC's Two Bioenergy Programs
- BioMAT Program Status
- BioRAM Program Status



Source: sciencesourc.com –
Wheelabrator Shasta Biomass Plant





CPUC's Two Bioenergy Programs

Bioenergy Market Adjusting Tariff (BioMAT)

- Feed-in Tariff program established by SB 1122 (Rubio, 2012)
- CPUC implemented the program in December 2014
- Facility capacity may range to maximum of 5 MW if its BioMAT export is < 3 MW of biopower
- 50 MW of procurement allocated to Sustainable Forest Management biomass
- A market-based mechanism is used to adjust price up or down depending on the level of program competition

Bioenergy Renewable Auction Mechanism (BioRAM)

- Guided by Governor Brown's Oct 2015 Tree Mortality Emergency Order, and the CPUC implemented in March 2016
- SB 859 (2016) expanded BioRAM procurement quantities / HHZ requirements, and the CPUC implemented in October 2016
- Required large IOUs to procure 146 MW of forest biomass from high hazard zones (HHZ)
- Uses the RPS standard RAM contract to expedite contracting process





BioMAT Program Status

Achievements to Date

- Four Sustainable Forest biomass contracts for a total of ~11 MW at the price of \$199.72/MWh
- No Category 3 BioMAT plants are yet in operation, but are currently under development

BioMAT Program Review

- Triggered by reaching soft cap of \$197 for two consecutive program periods
- Price frozen at \$199.72/MWh unless facility agrees to commit to utilizing at least 60% HHZ fuel
- CPUC staff developed a proposal for program improvements using stakeholder input
- A Program Review workshop was held in July 2019
- A Commission decision would ultimately adopt program modifications





BioRAM Program Status

- **IOUs have implemented six BioRAM contracts for a total of 153 MW of biopower:**
 - BioRAM 1 (Emergency Order): Escalating amounts of HHZ fuel required, culminating in 80% HHZ annual achievement
 - BioRAM 2 (SB 859): 60% HHZ fuel with 80% from Sustainable Forest Management required
- **CPUC implemented SB 901 to increase program flexibility:**
 - Modifications: 1) Expanded eligible HHZ feedstock; 2) Provided a monthly HHZ opt-out option; 3) Offered 5-year contract extensions; 4) Remove missed fuel requirements as an event of default
 - One facility has accepted the ability to lower its HHZ requirements from 80% to 60%
- **HHZ fuel Utilized:** Nearly 1 million bone dry tons (BDT) as of Dec 2018
 - 1 BDT = ~1 MWh which can typically power 1,000 homes in an hour
- **BioRAM Non-bypassable Charge:** All customers pay for the program through the Public Purpose Program charge on their utility bills, given the intended broad state benefits and higher program costs





Projects:

IOU Owned Utility BioRAM Procurement

IOU	Facility	Location	Capacity (MW)	BioRAM Phase ¹⁰¹
Pacific Gas and Electric	Burney	Shasta County, CA	29	BioRAM 1
Pacific Gas and Electric	Wheelabrator Shasta	Shasta County, CA	34	BioRAM 2
Southern California Edison	Rio Bravo Fresno	Fresno County, CA	24	BioRAM 1
Southern California Edison	Rio Bravo Rocklin	Placer County, CA	24	BioRAM 1
Southern California Edison	Pacific Ultrapower Chinese Station	Tuolumne County, CA	18	BioRAM 1
San Diego Gas & Electric	Honey Lake Power Company / Greenleaf	Lassen County, CA	24	BioRAM 1
Total			153	





Thank you!

For Additional Information:

www.cpuc.ca.gov

<https://www.cpuc.ca.gov/rps/>

https://www.cpuc.ca.gov/SB_1122/

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