
**SENATE COMMITTEE ON ENERGY, UTILITIES AND
COMMUNICATIONS**
Senator Steven Bradford, Chair
2023 - 2024 Regular

Bill No: AB 998 **Hearing Date:** 6/20/2023
Author: Connolly
Version: 4/17/2023 Amended
Urgency: No **Fiscal:** Yes
Consultant: Nidia Bautista

SUBJECT: Biomass energy facilities: State Energy Resources Conservation and Development Commission: report

DIGEST: This bill would require the California Energy Commission (CEC), by December 31, 2024, to issue a report on the utility-scale biomass combustion facilities still in operation as of January 1, 2024 and include various assessments and recommendations regarding their continued operation.

ANALYSIS:

Existing law:

- 1) Defines “renewable electrical generation facility” for purposes of the state’s renewable portfolio standard (RPS) to include biomass energy. (Public Resources Code §25741)
- 2) Requires electrical corporations, by December 1, 2023, to collectively procure, through financial commitments of five to 15 years, their proportionate share of 125 megawatts (MW) of cumulative rated generating capacity from bioenergy projects commencing operation before June 1, 2013. Requires local publicly owned electric utility serving more than 100,000 customers to procure their proportionate shares of 125 MW of cumulative rated generating capacity from those kinds of bioenergy projects subject to terms of at least five years. Exempts from the requirements a local publicly owned electrical utility that previously entered into five-year financial commitments for its proportionate share under specified conditions. (Public Utilities Code §399.20.3)
- 3) Requires an electrical corporation, local publicly owned electric utility, or community choice aggregator (CCA) with a contract to procure electricity generated from biomass that is operative at any time in 2018, and expires or expired on or before December 31, 2028, to seek to amend the contract to

include, or seek approval for a new contract that includes, an expiration date five years later than the expiration date in the contract that was operative in 2018, so long as the contract extension follows the feedstock requirements. Prohibits this requirement from applying to facilities located in federal severe or extreme nonattainment areas for particulate matter or ozone. (Public Utilities Code §8388)

- 4) Establishes and vests the State Energy Resources Conservation and Development Commission (also known as the California Energy Commission (CEC)) with the exclusive power to certify sites and related facilities for thermal powerplants. (Public Resources Code §25500 et seq.)

This bill:

- 1) Requires the CEC, on or before December 31, 2024, to issue a report on the utility-scale biomass combustion facilities still in operation as of January 1, 2024.
- 2) Requires the report to include various assessments of the biomass combustion facilities and options to maximize the environmental benefits of these facilities.
- 3) Requires the report to include a recommended strategy to upgrade biomass combustion facilities, where appropriate, that considers impacts on disadvantaged, rural, forested, and agricultural communities, impacts on the ability to maintain existing capacity for managing forest or other excess biomass, the cost of upgrading facilities and financing opportunities, impacts of upgrading biomass combustion facilities on the procurement costs of the energy produced and the associated impacts to ratepayer costs, and job creation or job loss that may result from the strategy.
- 4) Requires the report to include recommendations related to addressing various issues if biomass facilities cease operations, including: baseload energy generation, managing excess biomass, strategies related to processing waste, and job training.
- 5) Requires the CEC to include in the report an evaluation of the practicality and cost-effectiveness of upgrading utility-scale biomass combustion facilities that ceased operation before January 1, 2024, to determine whether such facilities could help California increase its capacity to manage forest and other excess biomass.

- 6) Requires the CEC, in preparing the report, to coordinate with the California Air Resources Board (CARB) and local air districts on assessments of environmental benefits and available technologies to maximize those benefits.
- 7) Imposes a state-mandated local program by imposing new duties on local air districts.
- 8) Requires the CEC, in preparing the report, to coordinate Department of Forestry and Fire Protection (CAL FIRE), the Department of Food and Agriculture, and the Department of Resources Recycling and Recovery on feedstock assessments for forest, agricultural, urban, and post-fire waste, engage with and solicit feedback from the communities in which biomass combustion facilities are located and the applicable local governments, and provide opportunities for stakeholder and public input.

Background

Biomass energy. Biomass energy is the general term for waste-to-energy power plants that burn organic material, including wood waste, to generate electricity. The CEC notes there are just over 80 operating biomass power plants in California, with installed capacity of about 1,260 MW. As of the most recent CEC inventory (2021), biomass energy represented just under three percent of the total in-state generation and just over two percent of the state's total powermix. Biomass energy can provide reliable and renewable baseload energy, or firm power, meaning that electricity can be generated during scheduled times and at predetermined power levels, unlike intermittent resources (such as solar and wind).

History of state policies to direct procurement of biomass for non-energy-related policies. A number of state policies have required and encouraged the procurement of biomass energy, in many cases to address other policy issues, such as tree mortality and wildfires. These include a 2015 executive order related to tree removal in High Fire Hazard Severity Zones (HHZs) and directing the California Public Utilities Commission (CPUC) to use its authority to extend contracts for bioenergy facilities receiving feedstock from HHZs. This resulted in the procurement of 50 MW of collective generating capacity from biomass generation facilities that use progressively higher annual minimum prescribed levels of HHZ material as feedstock, BioRAM 1 Contracts, by the electric investor-owned utilities (IOUs). BioRAM contracts were required to have terms of five-years, with the right to extend the five-year contract term for one year at a time, up to a cumulative total of 10 years so long as HHZ fuel is available at the minimum fuel requirement (80 percent). SB 859 (Committee on Budget, Chapter 368, Statutes of 2016)

included a new requirement for electric IOUs and publicly owned utilities (POUs) to procure their respective share of 125 MW from existing biomass facilities using prescribed amounts of dead and dying trees located in HHZs as feedstock. The electric IOUs were assigned the proportionate share of 96 MW with at least 60 percent of the feedstock coming from HHZs. SB 859 requires that the procurement costs would be recovered from all electric IOU customers on a non-bypassable basis.

SB 901 (Dodd, Chapter 626, Statutes of 2018) required a number of actions to reduce and prevent the risk of wildfires, which also included provisions to loosen the requirements on biomass facilities, including revising the HHZ fuel definitions, require BioRAM contracts to include a monthly compliance option with updated reporting and payment. SB 901 also prohibits biomass facilities for the BioRAM to operate in areas of the state with severe or extreme federal air quality designations, and revise default terms.

More recently, SB 1109 (Caballero, Chapter 364, Statutes of 2022) extended to December 31, 2023, the electrical IOUs' obligation to collectively procure their proportionate share of 125 MW of cumulative rated generating capacity from existing bioenergy projects, commencing operation before June 1, 2013, through financial commitments of 5 to 15 years, inclusive. The bill also exempted the electric POUs for (1) contracts with a facility operator who was in a bankruptcy or other insolvency proceeding, or (2) a contract for a project that does not deliver energy to the utility.

Costs of biomass energy. Many of California's biomass plants that originally came on-line in the 1980s and 1990s began dwindling production in the late 1990s. According to the CEC's website, the expiration of price support to the biomass industry from the government is the main reason for the reduction in biomass power generation in California. Biomass plants are hindered by high operation and feedstock transportation costs, which can result in insufficient revenue to cover operation and maintenance expenses. As a result, biomass energy is generally priced much higher than other renewable energy resources. According to the CPUC's 2021 *Padilla Report, Costs and Cost Savings for the RPS Program*, the average price of contracts executed in 2019 that were greater than three MW was 2.8¢/kWh (kilowatt-hour) compared to 3.5¢/kWh in 2020, compared to average contract price of existing BioRAM contracts of 12.0¢/kWh. In the November 2021 CPUC RPS report, the CPUC notes a number of challenges with accessing fuel for biomass facilities, including insufficient supply chain capacity, long hauling distances, and high transportation costs, as well as, the need for retrofits of existing facilities. The analysis notes: "Overcoming these barriers would require further, possibly substantial, investment and subsidies." Electric POUs have also shared

that biomass contracts were priced much higher than other energy resources, including a contract priced 20-30 percent more than other renewable baseload energy contracts for geothermal and landfill gas.

Forest biomass and wildfire. Wildfires have been growing in duration and ferocity over the past 20 years. Their growing risk is due to a number of factors, from accumulating forest fuels to a warming climate to expanding development in the wildland-urban interface. Better management of the fuels that contribute to this wildfire risk is one of the main strategies to help mitigate fires. California's forestry waste has increased as drought and tree die-off have provided large amounts of fuel for forest fires. Often biomass materials are piled and burned creating air pollution, such as black carbon, or left to decay, creating methane, which has a global warming potential 28 times more powerful than carbon dioxide (CO₂) over a 100-year time horizon. If left on the forest floors, biomass can provide fuel to wildfires. As a result, forested communities confronting the threat of catastrophic wildfires express support for the expansion of biomass plants as a strategy to address the excess fuels. Some idled biomass generation has come back into operation, not necessarily at full capacity, and new projects are being developed.

Comments

More work for the CEC? This bill would require the CEC to issue a report, within one year of enactment of this bill, on the utility-scale biomass combustion facilities in operation as of January 1, 2024 that includes numerous provisions. With the growing threat of wildfire there have been nearly annual efforts to expand the procurement of energy from biomass plants. However, the high costs to operate these facilities makes them less competitive in comparison to other energy resources. Additionally, some communities, especially in the San Joaquin Valley, have expressed concerns about the air pollution impacts from the operation of these facilities. While this bill attempts to have the CEC incorporate all these, and many other facets of the operation of the biomass plants, the CEC is not likely have the information, data, or expertise required to provide the report. While the bill notes the need to coordinate with other agencies and entities who are likely to have this information, including CARB, local air districts, CAL FIRE, and others, the CEC would benefit from more time to provide the numerous elements required in the report, including the time to engage the impacted communities. *Therefore, the author and committee may wish to amend this bill to move the date of the issuance of the report to December 31, 2025.*

Prior/Related Legislation

SB 488 (Alvarado-Gil, 2023) authorizes a community choice aggregator (CCA) to procure the proportionate share of the exempted portion of the existing bioenergy procurement requirement applicable to the publicly owned utilities, and requires the CPUC to recover the costs from all electric investor-owned utility distribution customers. The bill failed passage in this committee.

SB 1109 (Caballero, Chapter 364, Statutes of 2022) extended requirements on electric IOUs to procure energy from biomass generating electric facilities by five years and requires extension of existing contracts by five years.

SB 843 (Aguiar-Curry, Chapter 234, Statutes of 2021) authorized CCAs to submit eligible bioenergy-projects for cost recovery from electric utility ratepayers, pursuant to the BioMAT program, if open capacity exists within the 250 MW program limit.

SB 515 (Caballero, 2019) would have expanded the fuels and feedstocks that are eligible to satisfy requirements related to specified contracts for mandated electricity generation from biomass facilities. The bill was further amended to require a report on available fuel feedstocks. The bill died in the Assembly Committee on Appropriations.

SB 901 (Dodd, Chapter 626, Statutes of 2018) addressed numerous issues concerning wildfire prevention, response and recovery, including provisions related to biomass operations and electricity procurement.

SB 859 (Senate Budget and Fiscal Review, Chapter 368, Statutes of 2016) required retail sellers of electricity to purchase a total of 125 MW of power from biomass facilities that generate electricity from forest materials removed from specific high fire hazard zones, as designated by CAL FIRE in the Governor's Proclamation of a State of Emergency issued October 30, 2015.

FISCAL EFFECT: Appropriation: No Fiscal Com.: Yes Local: Yes

SUPPORT:

Association of California Water Agencies
California Compost Coalition
Rural County Representatives of California
San Joaquin County Board of Supervisors
Sierra Business Council

OPPOSITION:

None received

ARGUMENTS IN SUPPORT: According to the author:

As California continues to struggle with the monumental task of processing millions-of-tons of forest waste generated by wildfire mitigation projects, the State remains reliant on many older, combustion biomass facilities. With forest material byproducts increasing, it is incumbent upon the State to identify opportunities to modernize remaining combustion biomass facilities to improve their function and reduce operational emissions. AB 998 accomplishes this task by requiring CEC to study these issues, as well as creating a contingency plan to respond to the loss to forest waste processing capacity and local jobs that could occur as the result of combustion biomass facilities shutting down, or temporarily ceasing to operate.

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