

## WOODAGEDDON

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Sustainable Organics Recycling

### BURNED Out and BioMATTED

With 130 million dead trees, devastating forest fires, and closure of many biomass plants over the last few years, Woodageddon continues to hit California hard without a solution in sight. [AB 2208 \(Aguiar-Curry and Garcia\)](#) would have helped meet California's climate goals and keep biomass plants relevant by encouraging the use and development of baseload renewable energy as part of a diverse portfolio of renewable energy resources. This would have allowed wood chips to wedge back into the subsidized market. AB 2208 went down in flames, [BURNED](#) by solar and wind interests and then Sierra Clubbed to death.

The biomass market had been relatively stable for more than 10 years up to 2014, averaging 600 MW of operating capacity generated by 33 biomass plants and utilizing 5 million tons of wood chips from the urban, agricultural, and forest sectors. In 2014, five plants shut their doors, totaling 85 MW. With expiring power purchase agreements, another ten plants representing 276 MW and approximately three million tons in wood chips were on the verge of closing until SB 859 (2016, Committee on Budget and Fiscal Review) was adopted requiring the utilities to purchase 125 MW of bioenergy per year over the next 5 years, with 80% of the feedstock coming from high-hazardous forest areas; which means over a million tons procured from the forest sector at the expense of the urban sector. Urban wood chips went down from 1.76 million tons in 2015 to just 1.19 million tons in 2017, losing 567,000 tons in 2 years, or 32% of their former market with a huge drop in pricing. With AB 901 regulations becoming effective in 2019, CalRecycle can determine how many tons may be used as Alternate Daily Cover (ADC) and Alternate Intermediate Cover (AIC), which will not count as diversion in 2020.

Meanwhile, SB 1383 is being phased in where 2.6 million tons of new wood waste will need to be diverted by 2020 and 3.9 million tons of new wood waste could be on the market in 2025. However, SB

1383 workshops continue to leave wood waste market development behind. The urban wood chips are piling up as the fields are burning with the ag sector having also lost over 500,000 tons of market share in 2 years.

The [Road to Wood Waste Recovery](#) should have already included wood mulches for erosion control along the state highways, but Caltrans has detoured and continues to remain in denial. The state is pushing mandates for diversion without promoting commensurate market development programs. Another forgotten law is PRC 42511 – Nonyard Wood Waste Disposal Minimization, where CalRecycle shall assist cities and counties to divert nonyard wood wastes which cannot otherwise feasibly be reduced, recycled, or composted, for processing and utilization as a fuel resource, provided that the facilities which use the nonyard wood waste as a fuel resource have obtained any necessary permits which allow the use of those materials as a fuel.

[SB 1122 \(Rubio, 2012\)](#) established the BioMAT program where 110 megawatts of renewable energy would be generated from wastewater treatment, municipal organic waste diversion, food processing, and/or codigestion, where about 40 MW of the contracts may be connected to biomass gasification that would represent about 500,000 tons per year; the same amount lost to the forest sector over the last 2 years. Old-line biomass facilities are dying along with millions of trees, and new biomass had to take PG&E to the BioMAT just to hopefully carve back tons already gone, let alone the new SB 1383 tons.

The State of the Biomass is now in a greater state of emergency with matters far worse than ever. Coupled with the failure of the recycling market due to China's National Sword, the statewide recycling rate will dip to just 43% in 2017. We are burned out, disconnected from fighting utilities, pining for markets, knocking on wood in good faith, but not disenfranchised as the tons keep coming.



### Bioenergy BURNED Again

AB 2208 would have helped meet California's climate goals and clean energy needs by encouraging the use and development of baseload renewable energy as part of a diverse portfolio of renewable energy resources keeping bioenergy alive. California remains a leader in the fight against climate change. At the heart of this fight is California's Renewable Portfolio Standard (RPS), which established the framework for increasing the use of renewable energy by requiring the state's load-serving entities (LSEs) to obtain a percentage threshold of their energy from defined renewable sources.

The RPS has been successful in encouraging wind and solar power production, but has resulted in little to no development of baseload renewable sources, such as biomass, necessary to complement the variable output of wind and solar. The result is a shortfall of reliable renewable energy that is projected to grow in future years as the RPS requirements increase. AB 2208 attempts to address this shortfall, but fell short itself due to opposition along the way, emanating from the Sierra Club as well as the wind and solar folks. The bill was burned before it had a chance. Woodageddon continues.

A feature-length documentary, [BURNED: Are Trees the New Coal?](#), takes an unwavering look at the latest energy industry solution to climate change. The film tells the story of how woody biomass has become the fossil-fuel industry's renewable, green savior, and of the people and parties who are both fighting against and promoting its adoption and use. The film interweaves the science of climate change, the escalating energy-policy disputes, the dynamics of forest ecology, the biomass industry practices, the conflict between jobs and trees, and the actions of activists and citizens who are working to protect their own health,

their communities, the forest, and the planet's climate. Woven together, the various stories present an intimate and visceral account of what is at this moment in time a critical, yet mostly unknown, national and international controversy. Yet, what the film failed to address was the 130 million dead trees standing in the Sierra Nevada due to drought, the burning of biomass in the agricultural fields, and the urban lumber that currently fills up 14% of landfills and rising.

AB 2208 was the right policy from a fiscal perspective as well. Studies show there is a direct cost savings to ratepayers when the grid includes a diversified portfolio that includes biomass resources. The cost to ratepayers is balanced by savings from reduced fuel purchases, more efficient use of grid resources and avoided emissions costs. Jobs savings and job creation serves as an economic stimulus. And, utility revenue requirements associated with a diverse portfolio are shown to be minimal.

Development of additional baseload resources such as biomass in California has additional environmental and economic benefits, particularly for economically and environmentally disadvantaged communities in the state, where many baseload facilities are or would be located. These benefits include improved air and water quality, helping the state meet its organics diversion goals, healthier forests, high-paying jobs, and tax revenue for mostly rural local governments.

With no other bioenergy activity this year, the Governor reached an agreement on the \$1.4 billion in Cap-and-Trade auction revenues. The Investment Plan for 2018-19 is generally good, but with CalRecycle's funding cut from \$40 million to \$25 million and the plan only including \$12.5 million for biofuels production, instead of the \$20 million per year to the CEC.

#### [AB 2208 \(Aguilar-Curry & Garcia\)](#)

**TOPIC:** This bill would require that not less than an unspecified percentage of the incremental procurement requirements for each compliance period be satisfied with geothermal, biogas, or biomass energy resources procured on or after July 1, 2017, until either an unspecified percentage of the total electricity products procured to satisfy the overall procurement requirements are from those energy resources or December 31, 2030, whichever occurs first. The bill would require an unspecified portion of this increment to be procured from the Salton Sea Known Geothermal Resources Area.

**STATUS:** Held in Assembly Appropriations Committee.  
**SUPPORT**

#### [AB 1288 \(Eggman\)](#)

**TOPIC:** This current spot bill would increase the solid waste tipping fee from \$1.40 per ton to an as-yet-to-be-determined amount to help develop organic materials processing facilities and other market incentive programs that promote the highest and best use of recovered materials. The bill may also establish a generator charge to augment the existing disposal fee.

**STATUS:** Held in Senate Environmental Quality Committee.  
**SUPPORT**

#### [AB 3178 \(Rubio\)](#)

**TOPIC:** This bill requires CalRecycle to consider the availability of markets until January 21, 2022, when determining whether a jurisdiction has made a good faith effort to implement its Source Reduction and Recycling Element (SRRE) and whether China's National Sword import policy caused the absence or loss of a market for recyclable materials. Amended on June 27, 2018.

**STATUS:** Read second time and referred to Senate Appropriations Committee.

**SUPPORT**



### Wood Chips Down 32%

[SB 498 \(Lara, 2014\)](#) required that the operator or owner of a biomass energy facility shall provide an annual report to CalRecycle regarding the total amount and type of biomass material accepted by the facility, starting with calendar year 2015 data. The SB 498 annual reporting for 2016 shows the amount of wood chips used across 22 biomass plants decreased from 5.02 million tons in 2015 to 3.71 million tons, with the urban sector drying up from 1.76 million tons in 2015 to just 1.35 million tons, losing 410,000 tons in just one year. The SB 498 annual reporting for 2017 shows the amount of wood chips used across 24 biomass plants decreased from 3.71 million tons in 2016 to 3.63 million tons, with the urban sector going from 1.35 million tons in 2016 to just 1.19 million tons, losing another 157,000 tons. In just two years the urban sector has lost a total of 567,000 tons, or a 32% of their former market.

In 2016, [SB 859 \(Committee on Budget and Fiscal Review\)](#) required the utilities to purchase 125 MW of bioenergy per year over the next 5 years, with 80% of the feedstock coming from high-hazardous forest areas, which meant over a million tons forest wood chips procured. Upon passage, we had predicted that the urban sector would be crowded out by over a million tons of capacity by 2020, as more contracts expire and the remaining contracts procure forest chips instead of urban wood chips, and we are over half way losing 567,000 tons of capacity in just 2 years. A note to the Sierra Club that is killing bioenergy solutions: The compost industry does not have the capacity to compost forest biomass, as we struggle to accommodate the displaced tonnages from the urban sector and as there is only so much wood waste that can be added to the compost mix to maintain a balanced C:N ratio.

### Taking it to the BioMAT

It has taken 6 years to finally implement [SB 1122 \(Rubio, 2012\)](#) where the Public Utilities Commission (PUC) adopted policies to require the inventor-owned utilities to purchase up to 250 MW of renewable energy from woody biomass. At present, the BioMAT program offers 12.7 cents per kWh-hour for projects using urban waste, wastewater, food processing and codigestion; 18.7 cents per kWh-hr for projects using dairy and agricultural waste, and 19.9 cent per Kwh-hr for forest biomass projects. Nearly a dozen BioMAT projects have been waiting since last fall for the utilities to execute their BioMAT contracts, as PG&E continued to find reasons to delay and postpone putting projects at risk.

The PUC issued resolution after resolution ordering the utilities to execute BioMAT contracts. PG&E threatened to sue the PUC, claiming that the BioMAT violates federal law. Despite PG&E's threat, the CPUC adopted Resolution E-4922 in March ordering the utilities to execute the pending BioMAT contracts within 30 days and to continue BioMAT procurement. Julia Levin and the Bioenergy Association of California (BAC) have been tirelessly advocating to ensure that the current program continues while the PUC considers changes to it, removing the 5-year program end date, and addressing interconnection issues.

CCC members Phoenix Energy and Mt. Diablo Resource Recovery took PG&E to the BioMAT and the program is finally moving forward and even starting to pick up the pace. PG&E just signed eight new contracts, bringing the total number of BioMAT contracts to 21 so far, for a combined total of 31 megawatts of new small-scale bioenergy capacity. We have a long way to go to fulfill the 250 megawatts required by the program, but this is an important step forward.

The signed utility contracts are noted below, but there are none for urban wood waste yet: PG&E – 15 contracts total, including 3 using agricultural waste, 5 using dairy waste and 3 using forest biomass, for a total of 19.79 MW. SCE – 5 contracts total, including 1 food processor, 1 wastewater, 1 diverted organic waste and 2 dairy projects, for a total of 8.27 MW. SDG&E – a single 3 MW project in agricultural.

### [SB 1383 - REGULATIONS](#)

CalRecycle held it's seventh in a series of workshops on May 8, 2018, in Sacramento, and on May 7, 2018, in Carlsbad to discuss the SB 1383 implementation process. Staff presented a lengthy overview of the changes made to the final informal draft of the rulemaking text (<http://www.calrecycle.ca.gov/Actions/Document.ashx?id=8919>), of which most were in response to stakeholder feedback. The draft regulations include new jurisdictional procurement requirements for compost and renewable natural gas, among the numerous revisions. CalRecycle plans to adopt the regulations in early 2019. Although the regulations will not take effect until 2022, adopting them in 2019 allows regulated entities approximately three years to plan and implement necessary budgetary, contractual, and other programmatic changes. Jurisdictions, haulers, and generators should consider taking actions to implement programs to be in compliance with the regulations on January 1, 2022. During 2019, CalRecycle will be networking, providing technical assistance, and developing tools, model ordinances, contracts, and case studies to support efforts at the local level to meet the organic waste reduction targets and comply with the regulatory requirements.

### [AB 901 REGULATIONS](#)

Notice of the proposed regulations was published in the California Regulatory Notice Register by the Office of Administrative Law (OAL) on January 26, 2018, beginning the formal 45-day comment period of the rulemaking process. The sixth draft of the proposed regulatory text was released on May 16, 2018 for a 15-day formal comment period. Please refer to the "Notice of Changes to Proposed AB 901 Regulations".

## Phoenix Energy - Breaking New Ground

**The California Compost Coalition** is a registered Lobbying Coalition with the Fair Political Practices Commission (FPPC), created in 2002 by a group of compost operators in response to demands for increased recycling of organic materials & production of clean compost, bioenergy, anaerobic digestion, renewable natural gas, and biochar.

### CCC Members

Agromin  
Atlas Disposal  
Burrtec Waste Industries  
Caglia Environmental  
California Waste Recovery Systems  
California Wood Recycling  
CleanFleets.net  
Clean Fleets Advocates  
Clover Flat Compost  
Cold Canyon Compost  
GreenWaste Recovery  
Harvest Tulare  
Harvest Lathrop  
Marin Sanitary Service  
Mt. Diablo Resource Recovery  
Napa Recycling Compost  
Northern Recycling Compost  
Organic Waste Solutions  
Phoenix Energy  
Quackenbush Mt. Compost  
Recology Blossom Valley Organics  
Recology Feather River Organics  
Recology Jepson Prairie Organics  
ReFuel Energy Partners  
Soiland Co, Inc.  
Sonoma Compost  
Tracy Delta Compost  
Upper Valley Recycling  
Vision Recycling  
Zanker Road Resource Management  
Z-Best Compost Facility  
Zero Waste Energy Development  
Zero Waste Energy, LLC

### CCC Executive Committee

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Steve Peterson, Financial Advisor  
Rick Moore, Peer Review Engineer  
Monica White, Sustainability Advisor  
Sean Edgar, Fleet Advisor

### CCC Legislative Affairs

Justin Malan, EcoConsult  
Neil Edgar, Edgar & Associates Inc.

Phoenix Energy is a private label power company that builds, owns, and operates on-site biomass conversion plants in partnership with businesses in the urban waste, agriculture, and forestry industries. Phoenix Energy helps its partners become their own energy providers for on-site use to run compost facility and MRF equipment, and sell the excess energy at renewable energy incentive rates.

Greg Stangl, owner and CEO, got his start in Europe with a company he and two partners created called Energy Investors. This business made natural gas and biomass based boiler solutions for large industrial customers like hospitals, military bases and schools. When fears of a Russian gas embargo drove Central European customers to consider biomass energy generation, Energy Investors began working on gasification. That work led to the creation of Phoenix Energy upon Greg's return to the US. Greg has an MBA and a degree in International Economics from Columbia University.

Phoenix Energy is a distributed generation power company that combines proven technologies to provide its partners, customers, and themselves with profitable on-site power. Stangl has built two plants to date in the Central Valley, with a third plant currently under way in North Fork. Seven new plants are CEQA ready, with another three expected to be CEQA ready in the near future.

The 2-MW biomass gasification plant in North Fork, California, currently under construction, is the result of a public-private partnership between

the North Fork Community Development Council and Phoenix Energy. The plant will utilize local forest biomass sourced from restoration and fuel reduction activities on local forest lands, including the Sierra National Forest. The facility will utilize a GE-supplied biomass gasification system—the gasifier, gas conditioning system and engine—which GE and Phoenix Energy have collaborated on for design and implementation, and plan to replicate at future projects in the state.

The plant is expected to be fully operational mid-2019. Electricity generated from the 2-MW power plant will be sold to PG&E. Through the California

Energy Commission EPIC grant program, the plant received a \$4.9 million grant to help cover equipment and interconnection costs, and also secured \$900,000 in New Markets Tax Credit financing.

Phoenix and its joint venture partners create long-term power purchase agreements with local utilities and the on-site operators

creating sustainable and profitable businesses.

Biomass conversion facilities that use defined wood waste feedstocks and gasification technologies are considered renewable energy projects and are eligible for CEC grants and RMDZ loans. Phoenix built their first plant with a RMDZ loan from CalRecycle in Merced, and has negotiated heavily with PG&E on interconnection agreements and incentive pricing. Greg is active at the Public Utilities Commission on the implementation of SB 1122 (Rubio) that provides financial incentives for bioenergy projects under 3 MW in the emerging BioMAT program.

