

WOODAGEDDON

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Sustainable Organics Recycling

STATE OF THE BIOMASS

The drought may be over in most of the state, but there's a flood of dead trees in the Sierra Nevada. Last year's legislation was focused on the forest sector - leaving the urban biomass at the curb and the agricultural biomass burning in the fields. This year's new policy documents are not helpful either. *The California Forest Carbon Plan: Managing our Forest Landscapes in a Changing Climate* is laced with vision, purpose and hope for forest sector bioenergy. However, the *Short-Lived Climate Pollutant Strategy* forgot about black carbon from forest fires, and did not include bioenergy as a strategy for the million new tons of diverted urban wood waste. *The 2017 Scoping Plan Update* incorporates SB 350 to get to 50% renewable energy use by 2030 and has one bullet about all types of biomass feedstock to bioenergy without specifics. There is a push to get *The Bioenergy Action Plan of 2012* updated by 2018 to get more specific on what to do with urban biomass and get the SB 1122 BioMAT program finally launched to develop 250 megawatts of distributed bioenergy statewide.

With the dead trees, forest fires and closure of many biomass plants over the last few years, **Woodageddon** hit California hard. The State of the Biomass is now in a greater state of emergency since last year's legislation aided the forest sector, in turn making matters worse for the urban sector. At a meeting with the Governor's office late last year, the bioenergy industry was told to develop a compelling legislative strategy for biomass. The case has not apparently been made. Even with the regressive statewide recycling rate

of 47% and the smoky air in the Central Valley, there seems to be little in the hopper for 2017 to address urban biomass. At this rate, the 75% recycling goal by 2020 will certainly not be met.

The biomass market had been relatively stable for more than 10 years, averaging 600 MW of operating capacity generated by 33 biomass plants utilizing five 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, including one million tons of urban sector wood chips could close by 2020, or the urban wood likely gets displaced by the forest wood.

SB 859 will require 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 secured of forest wood chips. As a result, biomass plants in Burney, Chinese Camp, Rocklin, and Malaga have all received contracts from the utilities that will keep them open for another 5 years. Meanwhile, the urban sector will be further crowded out (by over a million tons in capacity) as more contracts expire and the remaining contracts procure forest chips. With AB 1826 and SB 1383 being phased in, 2.6 million tons of new urban 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. We are seeing the forest waste through the dead trees, but the urban wood waste will be left in the landfill as the limited bioenergy market contracts.

“The State of the Biomass is now in a greater state of emergency since last year's legislation focused on the forest sector ... in turn making matters worse for the urban sector.”

SB 498 BIOMASS ENERGY TONS

The biomass energy industry has kept records since 1980 on the amount of bone dry wood waste tons used to produce bioenergy from the urban, forestry and agricultural sectors (see insert chart) averaging 4.5 million tons per year since 2002. The urban sector has delivered an average of 1.5 million bone dry tons per year. The agricultural sector rivaled the urban sector over the last few years, averaging just under 1.5 million tons per year, while forest has dipped from over 1.0 million tons in 2002 to just over 0.5 million tons in 2015. Forest mill waste has averaged over 1.0 million tons per year. CalRecycle and policy experts should use this historical information as the baseline data.

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. CalRecycle presented the 2015 data (see insert chart) where just over 5 million tons were delivered, but it was not clearly specific by source or if it was bone dry tons or wet tons. There were 2.4 million tons of unspecified 'wood' and just 0.46 million tons accepted from the urban market. We have asked CalRecycle to allocate the unspecified 'wood' following the

historical baseline data to properly record the sustained urban biomass market from 2002 to 2015, in order to properly gauge the demise of this market due to the shuttering of biomass plants and the shifting market mandates towards the use of forest sector biomass. The urban sector is being crowded out by forest waste and could have over 1.0 million tons per year displaced from the bioenergy market from now to 2020.

Without the historical baseline documented, of 1.5 million tons per year of urban biomass being delivered to bioenergy, and with this 2015 CalRecycle pie chart only showing urban as 9% of the market (delivering only 0.46 million tons in 2015), policy makers will not be able to understand the magnitude of the problem; this misinformation will only hurt an ailing industry sector. The SB 498 baseline for 2015 should follow the historical data, so that the impacts of the closing plants and the new forest sector contracts on the urban sector can be identified. Plus, we have asked SB 498 reporting be fixed as to not have unspecified wood waste tons in the future. Meanwhile, AB 901 regulations (starting 2018) should track wood waste tonnage used as ADC separate from green waste ADC, so that those tons that once went to bioenergy, which could be landfilled in the future, are known.

CCC Lobby Day - February 22, 2017

CCC will hold our second Lobby Day on Wednesday, February 22, 2017, at the **Downtown and Vine Restaurant** in Sacramento. CCC members will be briefed on the status of current legislation and potential bill concepts, including recent developments in efforts to preserve and/or reinvigorate the waning old-line biomass energy industry in California. Between rounds of all-day meetings with key legislators at the Capitol, several topics of concern by policy experts will be presented during lunch. CCC will be continuing to build relationships that will position our organization to effect necessary changes that will allow industry expansion on the heels of highly successful, table-setting policies last year.

[SB 859 \(Committee on Budget\)](#)

TOPIC: This bill would additionally require electrical corporations, by Dec. 1, 2016, to collectively procure, through financial commitments of 5 years, their proportionate share of 125 megawatts of cumulative rated generating capacity from bioenergy projects commencing operation prior to June 1, 2013, that each produces its generation using specified minimum percentages of certain types of forest feedstock. The bill would require local publicly owned electric utilities serving more than 100,000 customers to procure their proportionate shares of 125 megawatts of cumulative rated capacity from those kinds of bioenergy projects subject to terms of at least 5 years. At least 80% of the feedstock of an eligible facility, on an annual basis, shall be a byproduct of sustainable forestry management, which includes removal of dead and dying trees from Tier 1 & 2 high hazard zones and is not from lands that have been clear cut. At least 60% of this feedstock shall be from Tier 1 & 2 high hazard zones.

STATUS: Signed by Governor on September 14, 2016. **SUPPORT**

[SB 1613 \(Committee on Budget\)](#)

TOPIC: This bill would amend the Budget Act of 2016 by amending and adding items of appropriations. Of the amount appropriated in this item, \$25,000,000 shall be available for healthy forest programs, including fuels treatment, pest and diseased tree removal, and long-term protection of forested lands.

STATUS: Signed by Governor on September 14, 2016.

[SB 1383 \(Lara\)](#)

TOPIC: This bill would require CARB to approve and implement SLCP strategy to achieve a 50% reduction in anthropogenic black carbon below 2013 levels, by 2030, which includes open biomass burning in the fields and forest.

STATUS: Signed by Governor on September 19, 2016. **SUPPORT**

FOREST CARBON PLAN

The long-awaited draft plan was released on January 20, 2017, to improve the health of the state's forests, to lower the amount of black carbon and carbon dioxide released during wildfires, sequester more carbon in trees in the coming decades, and spur the production of cleaner electricity and fuels from biomass waste that is generated by forest-management projects.

The draft report, *California Forest Carbon Plan: Managing Our Forest Landscapes in a Changing Climate*, will serve as the "detailed implementation plan" for the state's forest carbon goals that are included in the California Air Resources Board's (ARB) regulatory "Scoping Plan" to achieve the state's 2030 GHG target of 40 percent below 1990 levels.

Specific recommendations in the report include: increasing the rate of forest fuels thinning and "treatment" to about 500,000 acres per year; and officials should also continue public investment to build out 50 megawatts of small-scale, wood-fired bioenergy facilities mandated through the 2012 law SB 1122, and maintain "large-scale bioenergy capacity in the short term at a scale necessary to meet the public safety and tree disposal needs stemming from the widespread tree mortality in the central and southern Sierra Nevada."

Phoenix Energy has been working within the forest sector for years having entitled 2.0 MW in East Placer County and 1.0 MW in Plumas County to add to the 2.0 MW under construction at North Fork in Madeira County. Phoenix Energy is also a forest waste fuel supplier where they have provided commitments to deliver forest wood chips to urban biomass gasification facilities to meet the 80% forest sector fuel requirements to obtain CEC grant funding.

AB 901 REGULATIONS

CCC has continued to work with CalRecycle during their informal rulemaking process, to aid in the development of new regulations on reporting requirements for recycling, composting, and disposal facilities, subsequent to the passage of AB 901 (Gordon). Following multiple meetings on reporting thresholds, organic materials, penalties and enforcement, multiple operations, jurisdictional requests and confidentiality, jurisdiction of origin and source sector, and material types and products, CalRecycle has issued their third draft regulations, dated February 10, 2017. With the publication of this latest draft, the informal regulatory phase is concluded. The formal regulatory process is expected to begin in the next month and concluded by the end of 2017.

While we continue to assure proprietary information will be protected, a major point of contention remains regarding the reporting of source sector information, which we believe unnecessarily complicates an already onerous process and will prove difficult to implement for many operators.

CCC has commented that the AB 901 regulations should track wood waste tons used as ADC separate from green waste ADC, so that those tons that once went to bioenergy, that would be landfilled in the future, will be known in order to track the demise of this market for urban wood waste. With AB 1826 and SB 1383 being phased in, 2.6 million tons of new urban 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, where wood waste ADC as a subset of green waste ADC should not get diversion credit after 2020.

SB 498 REPORTING

Operators of a biomass conversion facility are to submit an annual report to CalRecycle by April 1st of each year (starting 2016) containing specified information for the preceding year.

The annual report provides details about each biomass facility's specific operations and sources. SB 498 guidelines have since been updated as there are no regulations where the first-year reporting was riddled with misinformation.

2017 SCOPING PLAN UPDATE

The California Air Resources Board kicked off development of the 2030 Target Scoping Plan in October 2015 in coordination with other State agencies and has since been soliciting feed-back and comments from a team of economic advisors, local air districts, community members, affected stake-holders, and the AB 32 Environmental Justice Advisory Committee at public meetings throughout the State. The proposed 2017 Climate Change Scoping Plan Update was released on January 20, 2017, Inauguration Day, sending a message to the President that California will double down on setting the greenhouse gas reduction target to 2030. Achieving 50% renewable energy by 2020 is embedded in the plan where bioenergy using wood chips should play a large role that has not been fully defined. Comments are due by March 5, 2017. CCC has already submitted comments.

https://www.arb.ca.gov/cc/scoping-plan/2030sp_pp_final.pdf

SHORT-LIVED CLIMATE POLLUTANT SB 1383 PLAN

SB 605 (Lara, 2014) directed CARB to develop a comprehensive short-lived climate pollutant strategy, in coordination with other state agencies and local air quality management and air pollution control districts. The effort is to engage scientific experts, identify additional measures to reduce short-lived climate pollutants such as methane, which will require that 75% of all landfilled organics are reduced by 2025 and was placed into law with SB 1383 (Lara, 2016). CARB staff released the updated SLCP Strategy on November 28, 2016, with workshops in mid-December announced, and CCC comments were submitted on January 17, 2017.

<https://www.arb.ca.gov/cc/shortlived/meetings/11282016/revisedproposedslcp.pdf>

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, renewable natural gas, and biochar.

CCC Members

Agromin
Atlas Disposal
Burrtec Waste Industries
Caglia Environmental
California Wood Recycling
CleanFleets.net
Clover Flat Compost
Cold Canyon Compost
GreenWaste Recovery
Harvest Tulare
Harvest Lathrop
Marin Sanitary Service
Mt. Diablo Recycling
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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
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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-2017. 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.

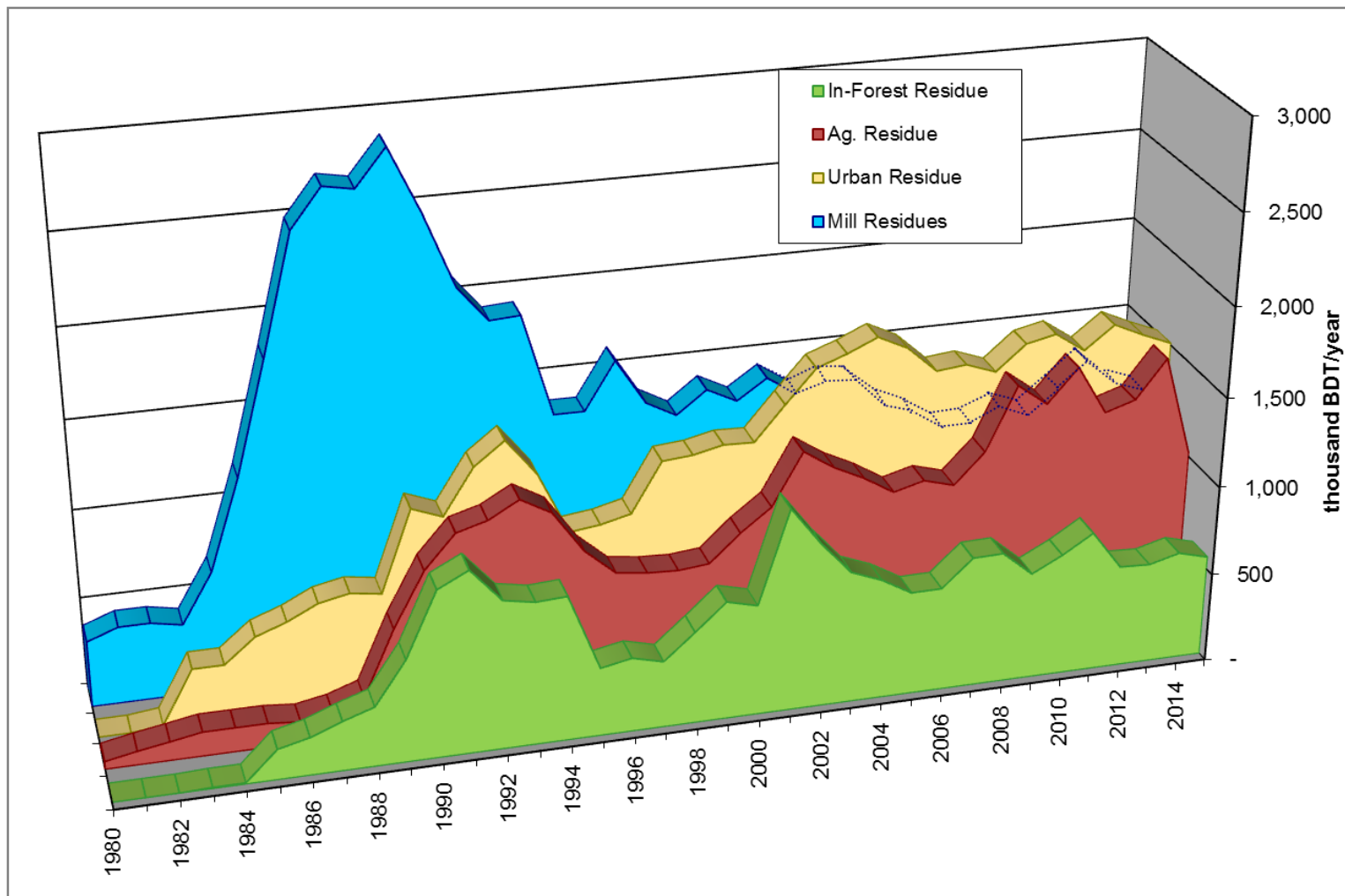
Phoenix and its joint venture partners create long-term power purchase agreements with local utilities and the on-site operating

business creating sustainable and profitable businesses.

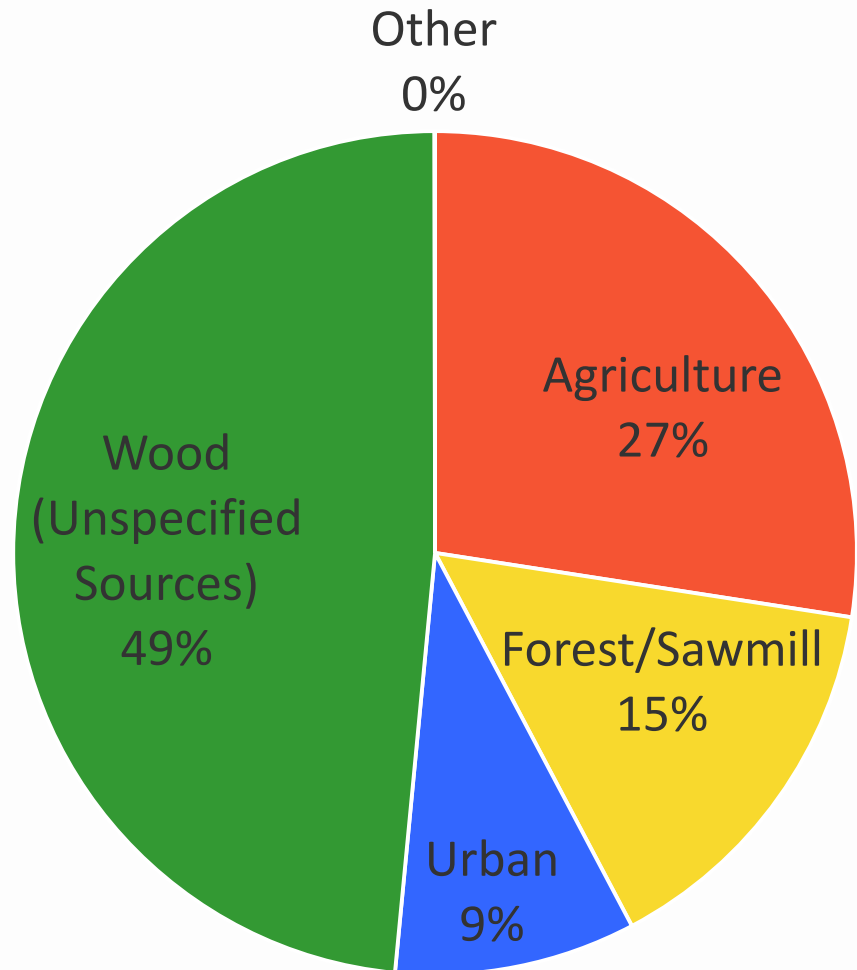
Biomass conversion facilities that use defined wood waste feedstocks and gasification technologies are considered renewable energy projects and are eligible for CEC grants and RMDZ loans. Phoenix built their first plant with a RMDZ loan from CalRecycle in Merced, and has negotiated heavily with PG&E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



California Biomass Fuels Market by Category



Materials Accepted



Material Type	Tons Accepted
Agriculture	1,377,841
Forest/Sawmill	744,617
Urban	464,256
Wood	2,433,338
Other	1,065
Total	5,021,117