

California is Fiddling as Homes Burn

Barkbeetled matchstick trees brought on by mega-droughts have been stacking up with deferred vegetation management, manifesting into over 3.5 million acres of fires, which have already destroyed over 4,200 structures midway through the most devastating season ever. Governor Newsom signed an Executive Order today announcing plans to accelerate the state's suite of climate change goals and clean energy targets, but it is highly doubtful he will do much about wood waste or bioenergy, or will promote carbon negative fuels. We will find out tomorrow on the [Climate Action Day](#). The Governor and Cal-EPA cannot see the biomass through the 150 million dead trees.

An interagency state team is evaluating pathways to achieve a carbon neutral economy by 2045, and how to manage the decline of in-state petroleum production. Newsom may end gasoline sales by 2030-35 and mandate more ZEVs without even recognizing the power of converting organic wastes. CARB and the Energy Commission (CEC) are already moving beyond the billion dollars of sunk costs of the CNG fueling infrastructure, even when substituting in-state carbon negative renewable natural gas (RNG) and near-zero NOx engines, to instead electrify the transportation sector much sooner than 2045. The organic waste processors and collection companies are Net-Zero GHG emissions now and could utilize carbon negative RNG industry-wide by 2030 in harmony with SB 1383, should incentives continue from CARB and CEC, but instead the state has been raising regulatory barriers.

[Deep Decarbonization in a High Renewables Future](#), published by CEC, provides pathways to have the electrical grid become carbon neutral by 2045, while squeezing out biomass energy and petroleum products by 2030. CARB held a Workshop on August 19, 2020 on the draft [Report of Achieving Carbon Neutrality in California](#), as they plan to diminish RNG as a transportation fuel. The most serious issues with the report include: non-scientific approach with a lowball estimate of California's bioenergy potential (40% lower than Lawrence Livermore National Lab's assessment); continued reliance past 2030 on diesel vehicles, rejecting RNG; ignoring the vast carbon reductions from the waste and recycling sector;

not recognizing the relationship between wildfire and electricity generation and not counting wildfire emissions altogether (which will be much greater than the industrial sector this year); and basically ignoring other sources of black carbon emissions (like diesel and ag burning). Apparently, decarbonization by the Deep Green State means dismissing all of that and pushing the biomass from the grid to the tank for low carbon biofuels, or making hydrogen via a gasification process to charge fuel cell-powered heavy-duty trucks, which is more than a generation away. The Gas Technology Institute published [Low-Carbon Renewable Natural Gas from Wood Waste](#), where a typical plant would cost \$340 million and use 945 tons per day of wood waste to produce a fuel with a very low carbon intensity. AB 3163 (Salas) will now include the definition of this type of biogas for pipeline injection.

The old-line biomass utility contracts are up next year. In 2019 they converted 4.5 million tons of wood waste into bioenergy, which favored forest waste and will continue to do so. With that, the urban wood waste sector declined from 1.76 million tons in 2015 to just 1.05 million tons in 2019 (a loss of 710,000 tons over 4 years). Meanwhile, SB 1383 will bring 3.9 million tons of new urban wood waste into the marketplace by 2025. SB 1383 mandates organic product local government procurement options, and if all went towards bioenergy, 2.1 million tons of urban wood waste could produce 237 MW and power 3.1 million homes. It's a good thing that the BioMAT program was extended another five years to give biomass gasification a chance. If the Governor was really serious, biomass energy should become the new baseload, coupled with micro-grids for when the sun does not shine, the wind does not blow, and when PG&E can't leave the lights on for you.

California is letting 2045 climate change policy goals get in the way of deep greenhouse gas reductions today and it appears that will continue, letting another crisis go to biomass waste. The latest Intergovernmental Panel on Climate Change Report stressed that a decade is all that remains to stop irreversible damage from climate change. With time running out, California is rearranging the electric cars on the deck of the Organic Titanic.

Burned Again

The Legislative session was like no other in history. Everybody was making it up as they went along, shifting from crisis to crisis, finally waving the white flag at the devastating forest fires. At a time leadership was needed, the State Senate and Assembly bickered to the very end. With our carbon footprint kicking the overtime clock, California plays for a sudden-death loss of opportunity. We are broke and burned.

Earlier this year, the Governor proposed a 5-year Climate Budget of \$12.5 billion, which quickly faded with COVID-19. There were several bond measure attempts that morphed during the pandemic and then stalled out with AB 3256 (Garcia). This bill would have authorized the issuance of bonds in the amount of \$6.98 billion pursuant to the State General Obligation Bond Law to finance projects. Amendments were accepted to place \$300 million towards CalRecycle for recycling and composting. Then leaders in the Senate and Assembly said they wanted to enact [the \\$100 billion plan](#), as the pandemic continued to weigh down the state economy. The plan would have magically accelerated revenue without raising taxes through tax vouchers, bonds, and borrowing. Rumors still swirl that a special session could be called this fall to do something about a lot. Some type of economic stimulus is needed, where green jobs and greenhouse gas reductions should be placed at the center of the circular economy.

The May 2020 Cap-and-Trade Auction only generated \$25 million in state revenue for the Greenhouse Gas Reduction Fund, which was much less than the \$600 to \$700 million that the state received from recent quarterly auctions. Then it bounced back in the August 2020 Auction with \$500 million, giving a little hope for composting and recycling funding.

[AB 3163 \(Salas\)](#)

TOPIC: Biomethane Procurement. Existing law requires the PUC, in consultation with CARB, to consider adopting specific biomethane procurement targets or goals for each gas corporation so that each gas corporation procures a proportionate share. Existing law defines “biomethane” for that purpose as biogas that meets specified standards adopted by PUC for injection into a common carrier pipeline. This bill would instead define “biomethane” for that purpose as methane produced from an organic waste feedstock, rather than biogas, that meets those specified standards and is either produced from the anaerobic decomposition of organic material or produced from the noncombustion thermal conversion of specified materials.

STATUS: Enrolled to the Governor on August 31, 2020. BAC Sponsor

[AB 2285 \(Com. Transportation\)](#)

TOPIC: AB 32 authorizes CARB to include the use of market-based compliance mechanisms, and requires all moneys collected by CARB as part of a market-based compliance mechanism to be deposited in the Greenhouse Gas Reduction Fund and to be available upon appropriation by the Legislature.

The California Clean Truck, Bus, and Off-Road Vehicle and Equipment Technology Program, upon appropriation from the Greenhouse Gas Reduction Fund, funds zero- and near-zero-emission truck, bus, and off-road vehicle and equipment technologies and related projects. The program provides that projects eligible for funding include, among others, technology development, demonstration, precommercial pilots, and early commercial deployments of zero- and near-zero-emission medium- and heavy-duty truck technology, and requires, until December 31, 2020, no less than 20% of funding made available for that purpose to support early commercial deployment of existing zero- and near-zero-emission heavy-duty truck technology. This bill would extend the requirement that 20% of that funding be made available for that same purpose until December 31, 2021.

STATUS: Approved by the Governor on September 18, 2020

[PUC RNG Interconnected](#)

This PUC adopted Decision 20-08-035, on August 27, 2020, Order Instituting Rulemaking to Adopt Biomethane Standards and Requirements, Pipeline Open Access Rules, and Related Enforcement Provisions. Findings of Facts were (1) Renewable gas produced by gasification may contain carbon monoxide and other chemicals in addition to methane.; (2) The Office of Environmental Health Hazard Assessment and the CARB together create pipeline injection standards for health-based constituents of concern and testing; (3) Developers may construct projects that interconnect with utility infrastructure provided the construction is done to utility standards and subject to safety review and approval by the utility; and (4) The proposed Standard Renewable Gas Interconnection Tariff authorizes developers of renewable gas projects to self-design and construct such projects.

[Carbon Neutrality](#)

CARB held a Workshop August 19, 2020 on the [Draft Report of Achieving Carbon Neutrality in California](#) prepared by E3, with plans to squeeze out RNG as a transportation fuel. [CCC submitted comments](#). The Draft Report makes several disturbing assumptions about the future of medium- and heavy-duty vehicles in California. First, it assumes that RNG use in vehicles will be phased out by 2035. At the same time, the Draft Report assumes that Californians will continue to purchase medium- and heavy-duty vehicles powered by diesel engines for the next few decades. And the only reason for that assumption is that the adoption Advanced Clean Truck Regulations is foisting electrification too soon upon our industry, which is stalling out purchases of new near-zero NOx RNG fleet, which can offer a carbon negative solution now.

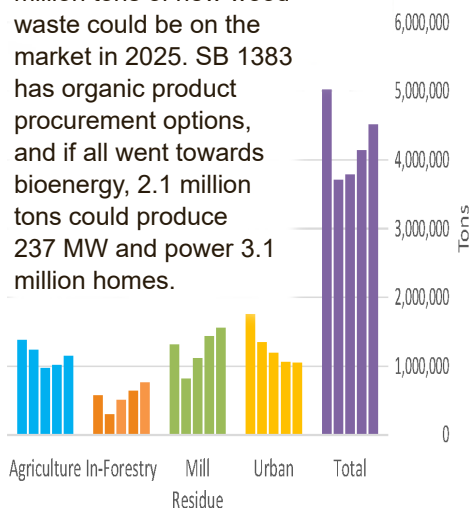
The Draft Report also incorrectly assumes no carbon reductions from the waste sector. The Waste Sector and the compost industry are Net-Zero greenhouse gas Now, with a huge commitment to carbon negative fuel now. E3 should not be making these irresponsible assumptions and CARB should have provided E3 more about current polices underway.

Urban Chips Down 40%

SB 498 (Lara, 2014) requires 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 2019](#) and the graphic below shows a rebound of 4.51 million total tons accepted in 2019, up from 3.7 million tons in 2016, with a growth across the in-forest, mill residue and agricultural sectors, at the expense of the urban sector. The urban sector provided 1.76 million tons in 2015 and has steadily declined to just 1.05 million tons in 2019, a loss of 710,000 tons over 5 years, or 40%. We had hoped that those tons went to mulch or bulking agents, but 490,000 tons of those were probably disposed of.

Comparing CalRecycle Waste Characterization Studies, there was 2.68 million tons of urban wood waste disposed of in 2014, and 3.16 million tons disposed of in 2018, an increase of 18%, or 490,000 tons that could have been biomass fuel was probably disposed of.

Meanwhile, SB 1383 is being phased in, we have to make up for those 490,000 old biomass tons that were disposed of, plus 2.6 million tons of new wood waste will need to be diverted by 2022 and 3.9 million tons of new wood waste could be on the market in 2025. SB 1383 has organic product procurement options, and if all went towards bioenergy, 2.1 million tons could produce 237 MW and power 3.1 million homes.



EPIC BioMAT

The CPUC just approved two important Decisions on the BioMAT program and EPIC (Electricity Program Investment Charge) program, which has provided tens of millions of dollars to small-scale bioenergy projects. In summary:

The BioMAT Decision

- Extends the program through the end of 2025 to get 12.77 cents per kilowatt hours for biomass gasification facilities up to 3 MW.
- Increases delivery flexibility for the first year
- Allows more contract changes over the life of the project
- Extends the Commercial Operation date from 24 months to 36 months
- Spreads program costs across all ratepayers, not just the purchasing IOU

IERP UP

Bioenergy Association of California (BAC) once again led the charge on comments to the CEC to include specific recommendations for biomethane procurement as part of the 2020 Integrated Energy Policy Report to increase biomethane production, as its use is critical to meet the state's climate change, air quality, waste reduction, and clean energy. Five overarching points were submitted; (1) Increasing Biomethane Production Critical to Achieve State's Climate Policies: Bioenergy is also critical to achieve SB 1383 mandates and carbon neutrality by mid-century. According to a recent report by Lawrence Livermore National Lab, bioenergy can provide more than two-thirds of all the negative carbon emissions needed to achieve carbon neutrality; (2) Increasing Biomethane Production and Use Critical to Reduce Air Pollution: Increasing in-state biomethane production and use can reduce air pollution significantly. Biogas used in near-zero emission natural gas trucks can cut NOx and toxic air contaminants more than 90 percent compared to heavy-duty diesel trucks; (3) Increasing Biomethane Production and Use Critical to Clean Energy Goals; (4) Biomethane Production Critical to State's Wildfire and Forest Health Goals; and (5) Increasing In-state Biomethane is Required by Numerous State Laws such as SB 1383 and 5 other laws.

SB 1383 Regulations

SB 1383 regulations may finally be approved by November 2020, as staff had to respond to 250 comments, which took some time and we always have the COVID excuse. CalRecycle released a series of SB 1383 implementation tools on September 14, 2020. These tools will provide motivational planning strategies and include a [Model Ordinance](#), [Model Franchise Agreement](#), [Model Procurement Policy](#), and [Model Edible Food Recovery Agreement](#), and will greatly help the regulated community prepare for implementation in advance of January 1, 2022. CalRecycle also releases the last month the [SB 1383 Compliance Process](#) where if a jurisdiction has done everything they could and makes a **Substantial Effort**, they would be eligible for a 2-3 year extension, as AB 939 good faith efforts go away.

SB 1383 Regs – Bioenergy

Procurement of Recovered Organic Waste Products is being proposed in Article 12, as authorized in SB 1383. Recognizing the importance in developing RNG demand and compost, CCC has supported the programs and the metrics in these regulations. The Bioenergy Association of California has fought hard to include bioenergy from wood chips in the regulations. CalRecycle has presented a fair share calculation with flexibility of procuring these bio-products. The per capita procurement target is 0.08 tons of organic waste per California resident per year. On or before January 1, 2022, CalRecycle will calculate the annual recovered organic waste product procurement target for each jurisdiction. One ton of organic waste recovered constitutes 650 kilowatt-hours of electricity derived from biomass conversion. With California's population projected to be 44 million in 2025, about 3.1 million tons of wood chips (up to 237 MW of bioconversion energy) would have to be procured by local government should compost, or RNG products not be an option. Bioenergy is carbon neutral, which will go toward the State goal to be carbon neutral by 2045. Racing to carbon neutrality, the role of bioenergy should get a boost, along with the resurgence of the BioMAT program, but likely will not.

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
- American Refuse
- BLT Enterprises
- Burrtec Waste Industries
- Caglia Environmental
- California Waste Recovery Systems
- Cold Canyon Landfill Inc.
- Marin Sanitary Service
- Monterey Regional WMD
- Mt. Diablo Recycling
- Napa Recycling and Waste Services
- Peña's Disposal Service
- Pleasanton Garbage Service
- Quackenbush Mt. Compost
- Recology
- ReFuel Energy Partners
- Soiland Inc.
- Tracy Material Recovery
- Trillium CNG
- Vision Recycling
- Zero Waste Energy LLC

CCC Partners

- Atlas Disposal
- California Wood Recycling
- Clover Flat Compost
- GreenWaste Recovery
- Northern Recycling Compost
- Resource Recovery Coalition of CA
- Sonoma Compost
- Synagro - South Kern
- Upper Valley Recycling
- Zanker Road Resource Management
- Z-Best Compost Facility
- Zero Waste Energy Development

CCC Technology Partners

- CleanFleets.net
- Compost Manufacturing Alliance
- Engineered Compost Systems
- Filtrex / Phoenix Energy
- Yorke Engineering LLC

CCC Governmental Affairs

- Justin Malan, EcoConsult
- Neil Edgar, Edgar & Associates, Inc.
- Evan Edgar, Edgar & Associates, Inc.
- Sean Edgar, Clean Fleets Advocates

BAC in Action

In a twisted and truncated 2020 Legislative session, you would think that things could not get worse given the huge lift needed for climate change. Very little happened in advancing greenhouse gas reduction solutions due to the focus on COVID-19. Then came the largest wildfires in the state's history in mid-August and still the Legislature failed to advance any meaningful actions on climate change. However, the [Bioenergy Association of California \(BAC\)](#) not only was able to pass legislation on pipeline RNG production, but also had major victories at the Public Utilities Commission (PUC), also fighting to preserve RNG demand at the California Energy Commission (CEC) and the California Air Resources Board (CARB).



Bioenergy
Association of
California

jlevin@bioenergyca.org

BAC was established in 2013 to promote sustainable bioenergy development. Bioenergy includes renewable electricity, low carbon transportation fuels and pipeline biogas generated from organic waste such as dairy and agricultural waste, food and yard waste, wastewater treatment, organic waste diverted from landfills, and forest biomass. BAC's members include private companies, public agencies, local governments, investors, consultants, nonprofits, individuals, and others interested in promoting community-scale bioenergy generation. BAC focuses on policy advocacy, public education and outreach, research, and industry best practices. BAC has common membership with CCC including Atlas Refuel Energy Partners, Monterey Regional WMD, Phoenix Energy, and Zero Waste Energy. BAC also works with Clean Energy, Trillium CNG, California Natural Gas Vehicle Coalition, Resource Coalition, Gladstein Neandross & Associates, CCC and

CleanFleets to form a powerful alliance to promote our common goals at CARB for the development of our facilities and the deployment of our near-zero RNG fleets with carbon negative fuel.

BAC sponsored AB 3163 (Salas) this year, which is one of the few bills to make it to the Governor's desk. AB 3163 will facilitate the development and production of in-state biogas from organic waste. AB 3163 provides flexible generation power, renewable hydrogen for fuel cells, combined heat and power, and the lowest carbon fuel of any kind for use in

heavy-duty vehicles, backup generators and hard-to-electrify end uses. BAC has also been at the forefront at PUC getting the BioMAT

program extended another five years, after keeping it alive 2 years ago when PG&E tried to unilaterally kill it off. BAC also got the PUC to approve a standard tariff for pipeline interconnection for renewable gas.

BAC and CCC worked with Gladstein Neandross & Associates this year on a report detailing the RNG projects expected to begin producing vehicle fuel from California's organic waste in the next four years. Some of the highlights are; (1) California will have 160 RNG production facilities online by the end of 2024; (2) Those facilities will produce a combined 119 million diesel gallon equivalents of low carbon and carbon negative vehicle fuels, enough to fuel 13,731 natural gas trucks; (3) The average carbon intensity of the California produced RNG will be negative 101.74 gCO₂e/MJ; and (4) Over the next 15 years, trucks running on this RNG will cut climate pollution by 51.4 million metric tons and will cut smog-forming pollution by 20.8 thousand metric tons per year.