September 3, 2020

Honorable Governor Newsom
State Capitol Building
Sacramento, CA 95814

RE: AB 3163 (SALAS) Energy: biomethane: procurement. – REQUEST FOR VETO

Dear Governor Newsom:

Earthjustice, Sierra Club California, the Leadership Counsel for Justice and Accountability, Center for Biological Diversity and Natural Resources Defense Council write to express our opposition to Assembly Bill ("AB") 3163 and respectfully request your veto. AB 3163 would expand the definition of biogas under Health and Safety Code Section 25420 from biogas that results from the anaerobic decomposition of organic material to include gas that is produced through the thermal conversion of biomass. Because biomethane is defined as treated biogas under Section 25420, AB 3163 correspondingly functions to expand the definition of biomethane.

Unlike biomethane derived from the anaerobic decomposition of organic material from sources such as landfills and wastewater treatment plants, biomass like wood and agricultural crop residue produce much smaller and more dispersed volumes of methane over years (and decades) of natural decomposition, as much of the biomass is converted aerobically or is incorporated on site as soil carbon. Synthetic processes such as thermal conversion of biomass to methane therefore create methane at much higher quantities than would otherwise occur. Accordingly, AB 3163 would turn California's goal of reducing emissions from methane on its head by enabling methane creation through a costly process with significant potential to increase greenhouse gas pollution.

Thermal conversion of biomass to methane is a costly and ineffectual climate solution. Because methane is a much more potent greenhouse gas than carbon dioxide, methane leakage alone can outweigh the climate benefit of producing methane from biomass.[1] Using biomass for energy also has a "carbon debt." Multiple studies have shown that it can take a very long time

[1] *See* Rebecca Gasper & Tim Searchinger, *The Production and Use of Waste-Derived Renewable Natural Gas as a Climate Strategy in the United States*, World Resources Institute, at 16 (Apr. 2018), https://www.wri.org/publication/renewable-natural-gas.

for new biomass growth (e.g. forest growth) to recapture the carbon emitted by combustion, even where fossil fuel displacement is assumed, and even where "waste" materials like timber harvest residuals are used for fuel.[2] Similarly, using forest-sourced woody biomass as feedstock for energy production is not an effective tool for managing the greenhouse gas emissions from forest fire. Numerous studies show that forest thinning for fuels reduction is a net carbon emission from the forest.[3]

The collection of organic materials like wood and agricultural residues for energy is also extremely costly. In the BioMat program, the CPUC anticipates that energy derived from such types of biomass will reach its cap of $212/MWh and would cost ratepayers $1.4 billion for just 50 MW of procurement.[4] In contrast, contracts for solar resources are now under $25/MWh.[5] Similarly, a California Energy Commission study found that even under optimistic cost projections, the cost of methane produced synthetically such as through thermal gasification of biomass would be 8 to 17 times more expensive than the expected price trajectory of natural gas.[6] To the extent biomethane derived from gasification of biomass is intended to displace the use of gas, far more savings could be realized through investment in measures that reduce gas demand such as building electrification.

To the extent AB 3163 is intended to provide a use for agricultural waste that would otherwise be open burned, AB 3163 is not tailored to this feedstock nor is expanding the definition of biogas to allow for the synthetic creation of methane an appropriate use. As found in a recent LLNL study, "[g]asifying biomass to make hydrogen fuel and CO_2 has the largest promise for CO_2 removal at the lowest cost and aligns with the State's goals on renewable hydrogen."[7] Limiting gasification of biomass to produce hydrogen does not pose methane leakage concerns nor does hydrogen emit pollution upon combustion like methane. Indeed,

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[2] *See, e.g.*, Stephen R. Mitchell *et al.*, *Carbon Debt and Carbon Sequestration Parity in Forest Bioenergy Production*, Global Change Biology Bioenergy (2012); Ernst-Detlef Schulze *et al.*, *Large-scale Bioenergy from Additional Harvest of Forest Biomass is Neither Sustainable Nor Greenhouse Gas Neutral*, Global Change Biology Bioenergy (2012); Giuliana Zanchi *et al.*, *Is Woody Bioenergy Carbon Neutral? A Comparative Assessment of Emissions from Consumption of Woody Bioenergy and Fossil Fuel*, Global Change Biology Bioenergy (2012); Jon McKechnie *et al.*, *Forest Bioenergy or Forest Carbon? Assessing Trade-Offs in Greenhouse Gas Mitigation with Wood-Based Fuels*, 45 Environ. Sci. Technol. 789 (2011); Anna Repo *et al.*, *Indirect Carbon Dioxide Emissions from Producing Bioenergy from Forest Harvest Residues*, Global Change Biology Bioenergy (2010); Manomet Center for Conservation Sciences, *Massachusetts Biomass Sustainability and Carbon Policy Study: Report to the Commonwealth of Massachusetts, Department of Energy Resources* (2010), https://www.manomet.org/wp-content/uploads/old-files/Manomet_Biomass_Report_Full_June2010.pdf.

[3] *See, e.g.,* Mary S. Booth, *Not Carbon Neutral: Assessing the Net Emissions Impact of Residues Burned for Bioenergy*, Environ. Res. Lett. (2018); Dellasala, D.A. *et al., Accommodating Mixed-Severity Fire to Restore and Maintain Ecosystem Integrity with a Focus on the Sierra Nevada of California, USA,* Fire Ecology 13: 148-171 (2017); Campbell, J.L*., et al.*, *Can Fuel-Reduction Treatments Really Increase Forest Carbon Storage in the Western US by Reducing Future Fire Emissions?*, Front Ecol. Environ (2011).

[4] CPUC, *Status of Bioenergy Market Adjusting Tariff*, Slide 4 (Oct. 11, 2017).

[5] *See, e.g.*, Julian Spector, *Nevada's 2.3-Cent Bid Beats Arizona's Record-Low Solar PPA Price*, Greentech Media (June 12, 2018), https://www.greentechmedia.com/articles/read/nevada-beat-arizona-record-low-solar-ppa-price#gs.65Y4pRo.

[6] California Energy Commission, *Natural Gas Distribution in California's Low-Carbon Future* at 16 (Oct. 2019), https://ww2.energy.ca.gov/2019publications/CEC-500-2019-055/CEC-500-2019-055-D.pdf.

[7] LLNL, Getting to Neutral, Options for Negative Carbon Emissions in California at 5 (2020), https://www-gs.llnl.gov/content/assets/docs/energy/Getting_to_Neutral.pdf.

projects are underway to retrofit idle biomass facilities in the Central Valley for hydrogen production, which would qualify as a renewable fuel and receive credits under the low carbon fuel standard.[8] The California Public Utilities Commission is also moving forward with a review of pipeline injection standards for hydrogen, creating an additional potential market for renewable hydrogen. Neither of these applications require a change to the definition of biogas under Section 25420.

Rather than enable pathways to create new and costly sources of methane, we encourage the State to maintain its focus on measures that reduce methane generation and that advance zero-emissions climate solutions. It is for these reasons that we must oppose AB 3163 by Assemblymember Salas and request your veto. If you have any questions regarding these concerns, please do not hesitate to contact Matt Vespa at mvespa@earthjustice.org, or any of the organizations listed below.

Sincerely,

Matt Vespa
Staff Attorney
Earthjustice

Daniel Barad
Campaign Representative
Sierra Club California

Phoebe Seaton
Co-Director
Leadership Counsel for Justice and Accountability

Brian Nowicki
California Climate Policy Director
Center for Biological Diversity

Merrian Borgeson
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Natural Resources Defense Council

[8] *See* Clean Energy Systems, Carbon-Negative Energy and Renewable Hydrogen Projects: An Opportunity in California (2019), Slide 35, https://sccs.stanford.edu/sites/g/files/sbiybj7741/f/ces_carbon_negative_energy-_sccs_distribution_18_november2019_.pdf.