

Dear Danny Cullenward and the IEMAC.

The 2023 IEMAC (Independent Emissions Market Advisory Committee) report does a service by pointing to the accounting problems attributable to the now outmoded assumption that biogenic GHG emissions are inherently carbon neutral. (The relevant section is pasted below.)

While this is an accounting problem for the Greenhouse Gas Inventory, it is a real world problem for the residents who live near biopower plants, which are for the most part extremely polluting. It also has concrete consequences for the public electrical companies which also don't report biogenic emissions on their Power Content Labels, thus passing off polluting sources as green and deceiving their customers. In Humboldt County the CSA (Redwood Coast Energy Authority) has signed a ten year contract with a highly polluting biomass plant (despite the 3 million Mt of CO₂e it involves) and is fighting community advocates tooth and nail to maintain the contract.

The same assumption of biogenic power being carbon neutral means the CPUC does not apply the Emissions Performance Standard to biopower plants. (If they used state of the art equipment they could possibly meet the standard; instead though most are heavily polluting inefficient antiques from the 80s.)

And of course, Cap and Trade exempts biopower from their compliance standard. So the 300,000 Mt of CO₂e emitted annually by our local plant is outside of Cap and Trade.

So, we think it would be appropriate to mention other ways in which the neutrality assumption is resulting in higher emissions that are not counted and which consistently mislead the public, officials, and legislators. Perhaps you could even recommend that LCAs be applied in all the domains where the neutrality assumption currently holds sway and that blanket exemptions in Cap and Trade, the RPS and CPUC rules should be eliminated.

Thanks for raising the issue and considering expanding your recommendation.

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Relevant section from the full report available at: (<https://calepa.ca.gov/wp-content/uploads/sites/6/2024/02/2023-ANNUAL-REPORT-OF-THE-IEMAC-draft-2024-02-09.pdf>)

Biogenic CO₂ Emissions

Burning fossil fuels releases CO₂. CO₂ is also emitted when combusting biomass, such as wood waste or crop residues. But across California's greenhouse gas accounting systems, CO₂ emissions are treated differently depending on whether they derive from fossil fuels or biogenic sources: fossil CO₂ emissions are "included," while biogenic CO₂ emissions are "excluded." Excluded biogenic CO₂ emissions are still reported to CARB, but CARB does not include them as a liability in the cap-and-trade program nor as part of its statewide emissions.

Biogenic CO₂ emissions derives from a set of little-known 2006 IPCC guidelines developed for land-sector emissions (Yona et al. 2022, Yona 2023).⁴ The standard argument for excluding biogenic CO₂ emissions from official greenhouse gas inventories is premised on the notion that biogenic CO₂ emissions re-release carbon that plants originally sequestered from the atmosphere, such that there is no net climate consequence. But scientists have long understood that the land-use and supply chain consequences of bioenergy and biomass production vary widely, such that the presumption of zero net emissions from all biofuels is inaccurate (Searchinger et al. 2009).

CARB's Low Carbon Fuel Standard (LCFS) reflects this understanding and uses lifecycle assessment methods instead of broad assumptions about biogenic CO₂ emissions. Under the LCFS, fuels sold in California are assigned a carbon intensity score, calculated as the total CO₂e per unit of fuel energy content. Consistent with the contemporary understanding of the climate costs and benefits of biofuels, LCFS carbon intensity scores are based on lifecycle assessment methods that account for carbon sequestration, production emissions, land use impacts, and combustion emissions.

For example, CARB estimates that the lifecycle emissions of conventional gasoline sold in California has emissions of just under 100.82 gCO₂e/MJ (CARB 2024a: Figure 5a). Meanwhile, CARB estimates that the average carbon intensity of a prominent gasoline substitute, ethanol, has emissions of just under 60 gCO₂e/MJ fuel (CARB 2024a: Figure 5a) — about 40% less than gasoline.

Although CARB calculates that ethanol reduces emissions by about 40% relative to gasoline in the LCFS program, it books the outcome in the GHG Inventory as though ethanol reduces emissions by 100% because the GHG Inventory excludes all biogenic CO₂ emissions. Booking a 40% reduction as a 100% reduction exaggerates its benefits by about 250%.

The accounting consequences of this practice are substantial. CARB's GHG Inventory shows that excluded biogenic CO₂ emissions — which are tracked, but not included in the statewide data used to measure compliance with California's greenhouse gas emission limits — rose 22.9 million tCO₂, from 24.8 million tCO₂e in 2000 to 47.7 million tCO₂e in 2021 (CARB 2023b).

Transportation fuel suppliers, who are the entities responsible for most biofuel-related emissions, reported that their excluded biogenic CO₂ emissions rose 16.4 million tCO₂, from 8.7 million tCO₂ in 2012 to 25.1 million tCO₂ in 2022 (CARB 2023a).⁶