| DOCKETED | |
|---|---|
| **Docket Number:** | 24-OIIP-03 |
| **Project Title:** | Informational Proceeding on Non-Energy Benefits and Social Costs |
| **TN #:** | 259612 |
| **Document Title:** | Bioenergy Association of California Comments on Non-Energy Impacts |
| **Description:** | N/A |
| **Filer:** | System |
| **Organization:** | Bioenergy Association of California |
| **Submitter Role:** | Public |
| **Submission Date:** | 10/21/2024 1:45:16 PM |
| **Docketed Date:** | 10/21/2024 |

*Comment Received From: Bioenergy Association of California*
*Submitted On: 10/21/2024*
*Docket Number: 24-OIIP-03*

# BAC Comments on Non-Energy Impacts (24-OIIP-03)

*Additional submitted attachment is included below.*

October 21, 2024

The Honorable David Hochschild, Chair
California Energy Commission
1416 Ninth Street
Sacramento, CA 95814

**Re: Comments on Non-Energy Impacts and Benefits (24-OIIP-03)**

Dear Chair Hochschild:

The Bioenergy Association of California (BAC) appreciates the opportunity to provide comments on the October 7 workshop on Non-Energy Impacts. This is an extremely important topic as California implements the most significant and far-reaching transition the energy sector – or any sector – has ever experienced. Maintaining reliable energy while achieving the state's climate change, air quality, public safety, and other goals is essential. To ensure that California's energy transition maximizes climate benefits – which is the primary reason for the energy transition - while minimizing negative impacts requires that the Commission consider the following impacts and benefits:

- The importance of a diverse portfolio, including firm power, resources to ensure reliability;
- Consideration of the electricity sector's impact on wildfires and the impacts of those fires on public safety, public health, water supply and quality, and carbon emissions or sequestration;
- The relative carbon reductions and types of carbon reductions achieved by different resources, including consideration of whether each resource emits or reduces emissions of Short-Lived Climate Pollutants and whether the resource can provide carbon negative emissions, both of which are needed to reach California's climate goals;
- Whether a resource can reduce emissions from open burning of forest or agricultural waste, landfill methane emissions, or dairy methane emissions;
- The needs of rural, especially forested, communities to increase energy reliability and reliability of water for fighting wildfires and serving communities during wildfire events; and
- The jobs and local economic benefits of different types of resources and different mixes of resources.

BAC represents about 100 members that are converting organic waste to energy to meet the state's clean energy, climate change, wildfire reduction, landfill reduction, and

clean economy goals. BAC's public sector members include cities and counties, Tribes, air quality and environmental agencies, waste and wastewater agencies, public research institutions, environmental and community groups, and a publicly owned utility. BAC's private sector members include energy and technology companies, waste haulers, agriculture and food processing companies, investors and consulting firms, and an investor-owned utility.

BAC urges the CEC to include analysis of each of the Non-Energy Impacts (NEI's) and Non-Energy Benefits (NEB's) described below.

1. **Non-Energy Impacts Should Include the Need for Diverse Resources, Including Diverse Firm Resources, to Ensure Reliability and Resilience.**

Any analysis of NEI's or NEB's should include an analysis of how particular resources impact reliability and resilience. The analysis should consider specific resources as well as the need for a diverse portfolio of resources. Both the Warren-Alquist Act and the original RPS legislation, SB 1078 (Sher, 2002), list resource diversity explicitly as a goal of the legislation. In fact, the RPS legislation lists "diversity" and "reliability" as the first two goals of the RPS, before public health and environmental benefits.[1]

At the October 7 workshop, M Cubed explained this well in stating that a diverse portfolio increases resilience.[2] In any complex system - including ecosystems, agriculture, nutrition and, of course, energy – diversity and redundancy increase reliability and resilience. In other words, with something as critical as electricity reliability, we should not put all our eggs in just one or two baskets.

The NEI analysis should also include an assessment of firm resources and the need for a diverse portfolio of clean, firm resources. Numerous reports in recent years have found that California will need to increase firm renewable power to meet the requirements of SB 100 while maintaining grid reliability. The Commission itself found that California will need up to 15,000 MW of clean, firm power for reliability.[3] Other reports have found that California will need more like 30,000 MW of firm power for reliability.[4]

In addition to its reliability benefits, firm power can also reduce ratepayer costs substantially. As one study found, a diverse portfolio of clean firm power technologies could cut California's overall electricity costs by two-thirds, even if the costs per megawatt-hour are higher than solar or wind, since the integration costs and marginal

[1] Public Utilities Code section 399.11(a).

[2] Presentation of Richard McCann, M Cubed, to the California Energy Commission, October 7, 2024, workshop slide 83.

[3] California Energy Commission, *2021 Integrated Energy Policy Report*, Volume III, at page 72.

[4] Long, et al, "Clean Firm Power is the Key to California's Carbon-Free Energy Future," *Issues in Science and Technology,* March 24, 2021.

costs of intermittent renewables will only increase as California approaches 100 percent renewable and zero carbon power.[5] As Environmental Defense Fund explains:

> "California needs a significant amount of clean firm power to meet its decarbonization targets while keeping rates affordable. Failing to procure clean firm power will require a massive overbuild of solar and wind that will increase rates by about 65 percent in 2045; by contrast, using clean firm power California could keep rates similar to those found today."[6]

The CEC's analysis of NEI's should consider the benefits of resource diversity – especially since diversity is an explicit goal of the RPS – and the benefits of firm power generally and a diverse portfolio of firm power.

**2. Non-Energy Impacts Should Include an Assessment of Fires Caused by the Electricity Sector.**

The October 7 workshop included information about gas leaks,[7] but never mentioned wildfires caused by electricity infrastructure and operations. Considering gas leaks while ignoring emissions caused by the electricity sector would create a very misleading and inaccurate assessment of NEI's. CalFire determines the cause of every large fire and has found that electricity infrastructure causes a large portion of California's wildfires. Since those fires directly impact public health and safety, not to mention costs to ratepayers, any assessment of non-energy impacts should include wildfires caused by electricity infrastructure. This analysis should include at least the following:

- Number, size, and emissions from electricity sector caused wildfires;
- Costs of mitigating wildfire risks and impacts, including forest fuel removal and other vegetation removal to reduce wildfire risks, costs of PSPS events and unplanned outages due to wildfires, costs of utility damages to National Forests and private lands;
- Impact of electricity caused wildfires on public health, agriculture, water supply and quality;
- Loss of carbon sequestration and increase in carbon emissions – especially Short-Lived Climate Pollutant emissions – from electricity sparked wildfires.

The electricity sector's impact on wildfires is significant and should be included in any assessment of non-energy impacts. Both Stanford University and the Placer County Air Pollution Control District have quantified these impacts and the costs to human life and public health and, since those impacts are the direct result of electricity infrastructure, should be included in an analysis of NEI's.

---

[5] E. Baik, et al, "What is different about different net-zero carbon electricity systems?" published in *Energy and Climate Change* 2 (2021) 100046, July 2021.

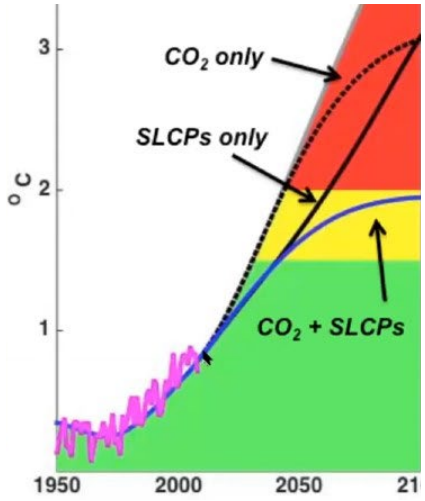
[6] Comments of Environmental Defense Fund on the 2021 Preferred System Plan Ruling, filed in R.20-05-003 on September 27, 2021, at page 2.

[7] October workshop slide 62.

3. **Climate Impacts and Benefits Should Include Separate Assessments of Short-Lived Climate Pollutant Emissions and Carbon Negative Emissions.**

The workshop on October 7 never mentioned Short-Lived Climate Pollutants, methane or black carbon emissions. This is a stunning omission when climate scientists agree that Short-Lived Climate Pollutant (SLCP) reductions are the most urgent climate mitigation measures because they benefit the climate right away. Measures to reduce fossil fuel use, by contrast, reduce carbon dioxide emissions, which don't begin to benefit the climate for several decades or longer. State law also requires significant reductions in methane and black carbon, the two most prevalent SLCPs emitted in California. SB 1383 requires a 40 percent reduction in methane and a 50 percent reduction in black carbon by 2030, underscoring the urgency of reducing these climate super pollutants right away.[8]

The graphic below from UC San Diego's Scripps Institute[9] shows clearly that focusing solely on fossil fuel reductions – which reduce $CO_2$ emissions – will not benefit the climate until 2050 or later and that only SLCP reductions bend the warming curve right away. The graph also shows that we will need both $CO_2$ reductions and SLCP reductions to meet our long-term climate goals.




The California Air Resources Board agrees with this analysis and has stated that the "science unequivocally underscores the need to immediately reduce emissions of short-lived climate pollutants (SLCPs)."[10] Climate scientists around the world agree. As the United Nations Environment Program (UNEP) stated, "Urgent steps must be taken to

[8] Health and Safety Code section 39730.5(a).
[9] https://bendingthecurve.ucsd.edu/.
[10] *Short-Lived Climate Pollutant Reduction Strategy*, adopted by the California Air Resources Board, March 2017, at page 1.

reduce methane emissions this decade."[11] The head of the UNEP said it even more strongly:

> "Cutting methane is the strongest lever we have to slow climate change over the next 25 years and complements necessary efforts to reduce carbon dioxide. The benefits to society, economies, and the environment are numerous and far outweigh the cost."[12]

President Biden and the President of the European Commission also released a joint statement saying that "reducing methane is the single most effective strategy to reduce global warming in the near term."[13]

According to CARB, 86 percent of California's methane emissions come from organic waste, which is why the *California Short-Lived Climate Pollutant Reduction Strategy* calls explicitly for more bioenergy produced from organic waste to reduce methane and black carbon emissions.[14] CARB has also found repeatedly that investments in bioenergy from organic waste are the most cost-effective of all of the state's climate investments.[15]

Given the urgency of SLCP reductions and the associated benefits for public health, agricultural productivity and more, the NEI assessment should include an assessment of the potential for different resources to reduce SLCP emissions and the associated benefits for the climate, public health, agriculture, and more of reducing those SLCP emissions.

4. **Non-Energy Benefits Should Include Reduced Pollution from Open Burning of Forest and Agricultural Waste, Landfills and Dairies.**

In considering NEI's and NEB's, the Commission should include an assessment of the air pollution emissions from burning of agricultural or forest waste when that waste is instead converted to bioenergy. The benefits to air quality of bioenergy compared to open burning are substantial, as documented by the California Air Resources Board and the statewide association of local air districts. According to CARB, bioenergy reduces

---

[11] https://www.unep.org/news-and-stories/press-release/global-assessment-urgent-steps-must-be-taken-reduce-methane

[12] Id.

[13] See: https://www.whitehouse.gov/briefing-room/statements-releases/2021/09/18/joint-us-eu-press-release-on-the-global-methane-pledge/.

[14] *2022 Climate Change Scoping Plan for Achieving Carbon Neutrality*, issued by the California Air Resources Board on November 15, 2022; *California Short-Lived Climate Pollutant Reduction Strategy*, adopted by the California Air Resources Board in 2017.

[15] California Air Resources Board, *California Climate Investments 2022 Mid-Year Data Update,* September 2022, showing that investments in dairy digesters and diverted organic waste cut carbon emissions for $9 and $10 per ton, respectively. ARB's 2021 Annual Report to the Legislature on California's Climate Investments also showed that investments in organic waste to energy were the most cost-effective of all the state's climate investments. See Table 2, pages 17-18.

methane, carbon monoxide, and particulate matter emissions by 98 percent compared to open burning or wildfires.[16] CAPCOA, the statewide association of local air districts, found that bioenergy also cuts NOx emissions by 40 to 70 percent compared to open burning.[17]

An assessment of NEB's and NEI's should also include the benefits of capturing and using landfill gas and wastewater biogas that would otherwise be flared. Converting that biogas to energy cuts pollution compared to flaring, especially when the resulting energy is used to displace diesel or other fossil fuels in backup generators or power plants.

The assessment of NEI's should also include the benefits of dairy digesters for reducing soil and water contamination, odors, and other pollution from dairies, which has been well documented by the California Department of Food and Agriculture, the California Air Resources Board and others.

### 5. The NEI Analysis Should Consider Impacts and Benefits in Rural and Forested Communities.

The PSE presentation at the October 7 workshop made clear that power sector impacts and benefits are not distributed equally across different parts of the state. Workshop slides 59 and 60 make clear that wildfire impacts and grid outages are far more likely in rural and forested regions of the state and that Disadvantaged Communities (DACs) are not a good proxy for electricity sector impacts. This is a critical point that is often lost in analyses that focus on DACs – the communities that are most impacted by wildfire and grid outages are generally rural, low population communities that do not qualify as DACs under CalEnviro Screens because of their low population density. Nonetheless, these are often poor communities with few economic resources or job opportunities and more challenges to energy reliability and resilience.

Ensuring reliable power in forested and rural communities should be a statewide priority since forests are also the source of two-thirds of California's water, provide the state's biggest carbon sink, and are the source of the state's hydropower. In addition, wildfires in forested regions affect air quality far beyond those regions, including in DAC's and other urban areas. Therefore, NEB's and NEI's in rural, forested communities should be included in this assessment.

### 6. Non-Energy Benefits Should Include Jobs and Economic Development.

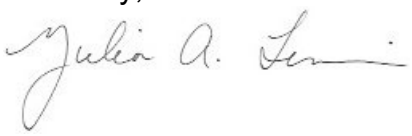
Different energy resources provide different jobs and economic benefits. Recent reports by the Clean Air Task Force and the Rand Corporation underscore the

[16] *California Forest Carbon Plan*, adopted by CalEPA, California Natural Resources Agency and CalFire in 2018, at pages 130 and 135.
[17] CAPCOA Biomass Policy Statement at page 1.

differences. Both reports focus on the potential for renewable energy development in the San Joaquin Valley and both reports found that bioenergy and hydrogen production create more jobs than solar or wind power. The reports also found that bioenergy and hydrogen – clean molecules, produce a higher proportion of jobs that are permanent and high skill / high paying jobs.[18] In other words, not all resources provide equal benefit for jobs and economic development. Permanent, high paying jobs provide far greater benefits than temporary, lower paying jobs.

Thank you for your consideration of these comments.

Sincerely,



Julia A. Levin
Executive Director

[18] Clean Air Task Force, "An Exploration of Options and Opportunities for the San Joaquin Valley's Clean Energy Future," 2024, at page 14; Kalra, et al, "Informing Clean Energy Planning in California's San Joaquin Valley," published by Rand Corporation, 2024, at pages vi and 19.