

February 20, 2024

Via Electronic Submittal

Clerk of the Board
California Air Resources Board
1001 I. Street
Sacramento, CA 95814

Re: Comments on the Proposed Amendments to the Low Carbon Fuel
Standard

Dear Honorable Members of the California Air Resources Board:

This firm represents the Leadership Counsel for Justice and Accountability (“Leadership Counsel”) in matters relating to the California Air Resources Board’s (“CARB”) Proposed Amendments to the Low Carbon Fuel Standard Regulation (“Proposed Amendments” or “Project”). Central Valley Defenders of Clean Water & Air, Animal Legal Defense Fund, and Food & Water Watch have informed us that they also join in this letter. CARB’s adoption of the Proposed Amendments is subject to the California Environmental Quality Act (“CEQA”).¹ CARB’s Draft Environmental Impact Analysis (“Draft EIA”) must therefore: evaluate all reasonably foreseeable impacts of the Proposed Amendments in sufficient detail; adopt all feasible mitigation measures to lessen the severity of the Proposed Amendments’ environmental impacts; and consider all feasible alternatives that would achieve the goals of the Proposed Amendments while lessening the severity of the Proposed Amendments’ environmental impacts. Public Res. Code §§ 21002.1; 21100. The Draft EIA fails to comply with each of these obligations.

¹ CARB acts pursuant to a certified regulatory program which exempts the agency from preparing an Environmental Impact Report (“EIR”) because the environmental analysis CARB is required to undertake is deemed the functional equivalent of an EIR. 17 Cal. Code. Regs. §§ 60000-60007; *POET, LLC v. State Air Resources Bd.* (2013) 218 Cal.App.4th 681, 710 CARB’s actions are subject to all other applicable provisions of CEQA. 14 Cal. Code Regs. § 15250; *POET, LLC*, 218 Cal.App.4th at 710.

As discussed in more detail below, the Proposed Amendments will increase the already significant incentive concentrated animal feeding operations (“factory farms”) have to create more Low Carbon Fuel Standard-eligible fuels and expand their operations to increase fuel production. Despite this inevitable effect of the Proposed Amendments, CARB’s Draft EIA fails to mention—let alone analyze—the environmental impacts associated with factory farm expansions or anaerobic digestion-related fuel production. The Draft EIA acknowledges that the installation of anaerobic digesters, which are necessary to generate LCF-eligible fuel from manure methane emissions, will have significant environmental impacts. However, the Draft EIA fails to adequately discuss and analyze these impacts, which include impacts to air quality and water quality and adverse public health impacts on communities living in close proximity to factory farms.

In addition, the Draft EIA fails to propose adequate mitigation measures to address the project’s impacts and fails to adequately analyze alternatives to the project. These inadequacies require that the Draft EIA be revised and recirculated so that the public and decision-makers are provided with a proper analysis of the project’s significant environmental impacts and feasible mitigation for those impacts. See CEQA Guidelines § 15002(a)(1) (listing as one of the “basic purposes” of CEQA to “[i]nform governmental decision makers and the public about the potential, significant environmental effects of proposed activities”).

This letter is submitted along with comments prepared by: Silvia Secchi, Ph.D., Professor, Department of Geographical and Sustainability Sciences, University of Iowa, Attachment A (“Secchi Comments”); and Paul Rosenfeld, Ph.D., Principal Environmental Chemist, Soil Water Air Protection Enterprise (“SWAPE”), Attachment B.

I. The Proposed Amendments incentivize factory far expansion and the installation of anaerobic digesters.

The Proposed Amendments will greatly increase the incentive that already exists under the Low Carbon Fuel Standard (“LCFS”) for factory farm expansion and digester installation.

This is evidenced in the stated Project objectives, which specify the following objectives:

- Increase credit prices by increasing the carbon intensity benchmarks (Objectives 1-4, Draft EIA at 13)
- Incentivize more digesters to achieve the Senate Bill 1383, Senate Bill 32, and Assembly Bill 1279 GHG reduction targets (Objective 5, Draft EIA at 13).

- Use the LCFS to build out and then transition biomethane infrastructure from supplying transportation fuels to supplying hydrogen fuels for stationary sources (Objective 5, Draft EIA at 13).

Therefore, CARB has designed the Proposed Amendments to increase carbon intensity targets, which in turn, will increase demand for credits and increase credit prices. Currently, biomethane accounts for approximately 20 percent of credits generated but only 1 percent of energy used for transportation.² The quantity and growth of biomethane credits in the LCFS has contributed to a glut of credits at low prices and diminished incentive for biogas investors to expand their investments.³ The Proposed Amendments would increase the value of LCFS credits and incentivize investors to build more digesters and generate more credits. The Proposed Amendments incentivize fuel production practices that will, in fact, increase GHG emissions and result in significant environmental impacts.

The Proposed Amendments include three distinct changes to the LCFS that will increase the incentives factory farms have to expand their operations and install anaerobic digesters: (1) strengthening the carbon intensity benchmark, thereby increasing the price of credits for eligible fuel pathways, including electricity, natural gas, and hydrogen generated from factory farm manure methane emissions; (2) limiting biomethane pathways eligible for LCFS credits with deliverability requirements, which will also increase the price of credits for eligible fuel pathways; and (3) restricting new compressed natural gas and hydrogen fuel pathways that qualify for 35 years of avoided methane crediting to those that CARB certifies or that break ground by December 31, 2029.

By strengthening the carbon intensity benchmark from a 20% reduction in carbon intensity by 2030 to 30% by 2030 and establishing a new 90% carbon intensity reduction benchmark by 2045, CARB will increase demand for LCFS credits in the near-term, especially with the “step down” in 2025.⁴ The intended and inevitable effect of this change will be to increase the demand of LCFS credits available for purchase, thereby increasing credit prices. Thus, those fuel pathways that qualify for credits after the amendments go into effect—including electricity, natural gas, and hydrogen derived from

² Aaron Smith, 2024.01.22 article <https://asmith.ucdavis.edu/news/cow-poop-now-big-part-california-fuel-policy> attached as Attachment C.

³ Id.

⁴ CARB Staff Report: Initial Statement of Reasons, at 22-26 (December 19, 2023) (“ISOR”).

factory farm manure—will receive more money per credit sold. The Proposed Amendments will therefore incentivize factory farms to increase their herds to maximize manure methane production (credit generation). This proposed change will also provide incentives for the installation of digesters at factory farms, and thus result in GHG and air pollutant emissions.

Additionally, the amendments include new deliverability requirements that will limit the biomethane eligible for LCFS crediting to biomethane “carried through common carrier pipelines that physically flow within California or toward end use in California.”⁵ Currently, all factory farms across the nation can qualify for LCFS credits on the same basis as factory farms in California. As with the carbon intensity benchmark change, these deliverability requirements will further limit the supply of LCFS credits, thereby increasing the amount of money eligible fuel producers receive per credit. Also, by limiting eligibility to those factory farms that have a connection to California, these deliverability requirements will further incentivize factory farm expansion specifically in California along with the installation of digesters at livestock facilities in California.

Lastly, the Proposed Amendments draw a bright line between factory farm fuel pathways that are certified before, and after, January 1, 2030, with respect to avoided methane crediting.⁶ If a factory farm fuel pathway is certified before January 1, 2030, that pathway is eligible to be renewed for up to three consecutive 10-year crediting periods. However, fuel pathways for bio-CNG, bio-LNG, and bio L-CNG from projects that break ground after December 31, 2029 can only generate avoided methane credits through December 31, 2040. Similarly, fuel pathways for hydrogen from projects that break ground after December 31, 2029 can only generate avoided methane credits through December 31, 2045. The Proposed Amendments therefore provide a significant incentive for factory farms to expand their herds and install digesters before December 31, 2029.

The Proposed Amendments’ incentives to expand CAFO herds and install polluting anaerobic digesters by increasing the monetization of manure methane will have significant impacts on the environment which the Draft EIA fails to adequately analyze and fails to require feasible mitigation or project alternative, as described below.

⁵ ISOR, at 30-31.

⁶ ISOR, at 31.

II. The Draft EIA's Environmental Impacts analysis violates CEQA.

A. The Draft EIA fails to analyze the Proposed Amendments' environmental impacts.

1. Expansion of factory farm herds is a reasonable expected result in response to the Proposed Amendments.

CEQA requires lead agencies to analyze all reasonably foreseeable environmental impacts caused by a project they are proposing to approve. *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 396-98; *Ebbets Pass Forest Watch v. Cal. Dept. of Forestry & Fire Protection* (2008) 43 Cal.4th 936, 954-55. A public agency can only omit analysis of its project's impact if it is "speculative." *Santa Rita Union School District v. City of Salinas* (2023) 94 Cal.App.5th 298, 334-36. An agency's conclusion that a particular environmental impact is too speculative to be adequately analyzed must be supported by substantial evidence. *Id* at 335. To support such a conclusion, the CEQA Guidelines require lead agencies to conduct a "thorough investigation" and "note its conclusion" that the impact is too speculative to be considered. 14 Cal. Code Regs. § 15145; *County of Butte v. Dept. of Water Resources* (2023) 90 Cal.App.5th 147, 161; *Citizens' Committee to Complete the Refuge v. City of Newark* (2021) 74 Cal.App.5th 460, 479.

The Draft EIA's analysis is "based on reasonably foreseeable compliance responses that are based on a set of reasonable assumptions" and purportedly "includes actions that could likely occur under a broad range of the potential scenarios."⁷ As explained in Section I, *supra*, the Proposed Amendments include three distinct changes that increase factory farms' incentive to generate more LCFS-eligible fuel by expanding existing herds and installing digesters. The Draft EIA considers the installation of anaerobic digesters a reasonable compliance response because the Proposed Amendments would "incentivize the collection and use of biomethane gas from dairies."⁸

The same elements of the Proposed Amendments that incentivize collecting existing biomethane at factory farms also incentivize increasing the volume of biomethane at factory farms. This incentive to produce more methane necessarily includes expanding factory farm herds to generate more manure. However, the Draft EIA ignores this potential impact entirely. The Draft EIA fails to provide any evidence, let

⁷ ISOR, at 39.

⁸ Draft EIA, at 64.

alone substantial evidence, supporting its omission of factory farm expansion as a reasonable compliance response.

As explained in Dr. Secchi's comments, the analysis of Project-related impacts related to resulting factory farm expansion fails for two reasons. First, the "ISOR offers no monitoring data showing whether the LCFS has caused, or the proposed amendments will cause, herd expansions at dairies or hog facilities located in California or outside of California."⁹ Without such data, the Draft EIA has no evidence to support an assumption that the use of digesters at factory farms results in a reduction of methane emissions overall.

Second, the evidence demonstrates that since the adoption of the low carbon fuel standard and Federal subsidy programs encouraging use of digesters, factory farms have expanded both inside and outside of California.¹⁰ Dr. Secchi posits that, in reality, the incentives created by the Proposed Amendments are likely to result in significant expansion of factory farms that will, in turn, increase the amount of methane produced.¹¹ Recent deregulation of biodigesters in Iowa is correlated with dairy expansions in that state.¹² As explained above, by increasing the carbon intensity benchmark and the value of credits, the Proposed Amendments will incentivize increased expansion and concentration of dairy operations leading to increased adverse environmental impacts (as discussed further below). The aforementioned is a reasonably foreseeable compliance response that is not accounted for in the ISOR or the Draft EIA.

Recent data from the USDA Ag Census further demonstrates that during the period that CARB has implemented its avoided methane crediting policy (since the 2018 LCFS amendments), the number of milk cows at large, California dairies have increased while the number of milk cows at smaller dairies have decreased, showing that the California dairy herd is consolidating into larger dairies that produce and store sufficient quantities of manure to finance and generate revenues from captured methane. The data show that for dairies with 2,500 or more milk cows, the milk cow herd increased from 808,503 milk cows in 2017 to 1,025,716 milk cows in 2022, or an increase of 28.6 percent. In contrast, the data show that for dairies with less than 1,000 cows, the milk cow herd *decreased* from 303,746 milk cows in 2017 to 144,472 milk cows in 2022, or a

⁹ Attachment A, Secchi Comments, at 1.

¹⁰ *Id.* at 5 and 6.

¹¹ *Id.*

¹² *Id.* at 3.

decrease of 52.4 percent.¹³ While correlation does not establish causation, the data strongly suggest that the LCFS has had a substantial effect on the increase in milk cows at the largest dairies which are most likely to install digesters and monetize their manure.¹⁴

2. The Draft EIA fails to adequately analyze nitrogen-based emissions from digesters that contribute to PM2.5 nonattainment and climate change.

Having failed to properly analyze the foreseeable expansion of factory farms as a result of the Project, the Draft EIA fails to analyze the Project's related impacts. It is well-established that "industrial dairies in the San Joaquin Valley are a major source of local air and water pollution, nuisance odors, groundwater overdraft, and greenhouse gas emissions."¹⁵ Specifically, dairies are the largest source of volatile organic compounds, in the San Joaquin Valley. Oxides of nitrogen result from combustion of fuels, including biogas fuels from anaerobic digesters. Volatile organic compounds and NOx are precursors to ozone formation, which can cause a variety of respiratory illnesses, especially in children and for people who have asthma.¹⁶ Factory farms and the resulting digesterate are also a significant source of ammonia, which impacts nearby residents as a toxic gas and also reacts to form ammonium nitrate, a form of fine particulate matter for which the EPA has classified the valley as nonattainment with the federal health-based National Ambient Air Quality Standard.¹⁷

¹³ The data also show that for dairies with more than 1,000 cows, the milk cow herd increased from 1,446,583 milk cows in 2017 to 1,543,730 milk cows in 2022, an increase of 6.9 percent.

¹⁴ U.S. Department of Agriculture Census, attached as Attachment D.

¹⁵ See, Briefing paper: Factory Farm Dairies, Biogas, and the Dangerous Path California is On, Leadership Counsel for Justice and Accountability, 2023, Attached as Attachment E.

¹⁶ U.S. Environmental Protection Agency, "Health Effects of Ozone Pollution", attached as Attachment F and available at <https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution#:~:text=Depending%20on%20the%20level%20of%20exposure%2C%20ozone%20can%3A,diseases%20such%20as%20asthma%2C%20emphysema%2C%20and%20chronic%20bronchitis.>

¹⁷ See 87 Fed. Reg. 60494 (Oct. 5, 2022) (proposed disapproval of plan to attain the 2012 annual PM2.5 standard), attached as Attachment G.

In addition, contaminated runoff can result in water pollution in both surface and ground water; the intensive water use required by factory farms results in overdraft of groundwater supplies; and caustic ammonia emissions can result in illness and odors. As discussed below, the Draft EIA's failure to analyze the impacts of the Proposed Amendments, both resulting in significant expansion of factory farms and due to increased use of digesters, implicates the EIA's analysis of all of the aforementioned environmental impacts. Even where the Draft EIA did purport to evaluate impacts, the analysis is perfunctory.

(a) Ammonia Emissions

Ammonia, a toxic, odorous gas, causes respiratory issues; irritation to the throat, lungs, and eyes; and lung damage if exposure to elevated ammonia levels is prolonged.¹⁸ In addition to the health risks imposed by increased local emissions, ammonia also reacts with nitrogen oxides (e.g., NO_x) in winter and contributes to the formation of ammonium nitrate, a fine particulate matter ("PM_{2.5}").¹⁹ In the United States, ammonia from agriculture accounts for the formation of almost one third of PM_{2.5}.²⁰ Exposure to PM 2.5 is linked to premature deaths in people with heart or lung disease, heart attacks, irregular heartbeat, aggravated asthma, decreased lung function and long-term lung conditions including cancer.²¹ Yet, the Draft EIA's analysis of the Project's public health and safety impacts is cursory at best.

(b) Greenhouse Gases

The Draft EIA analysis omits a full accounting of greenhouse gas emissions resulting from both a foreseeable expansion of factory farms and increased use of digesters.²² For example, as the Rosenfeld Comments explain, during biogas combustion in the anaerobic digestion process, ammonia is oxidized into nitrous oxides. Furthermore,

¹⁸ Attachment B, Rosenfeld comments, at 2.

¹⁹ Johns Hopkins Center for a Livable Future comments on LCFS Amendments dated February 20, 2024.

²⁰ Id.

²¹ USEPA, "Health and Environmental Effects of Particulate Matter", attached as Attachment H and available at <https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm#:~:text=Numerous%20scientific%20studies%20have%20linked%20particle%20pollution%20exposure,irritation%20of%20the%20airways%2C%20coughing%20or%20difficulty%20breathing>.

²² Attachment A, Secchi Comments, at 6.

digestate solids emit significant nitrous oxide emissions that negate methane captured by the digester. According to the EPA, nitrous oxide (“N₂O”) has a Global Warming Potential that is 273 times that of carbon dioxide (“CO₂”) for a 100-year timescale.²³ Therefore, N₂O emitted today remains in the atmosphere for more than 100 years, on average.²⁴ Yet, the Draft EIA omits any evaluation impacts from Project-related increases of N₂O.

In another example, NO_x emissions react with volatile organic compounds in the presence of sunlight to form ozone, which also contributes to climate change. Ozone (O₃) is the third most important anthropogenic greenhouse gas after carbon dioxide (CO₂) and methane.²⁵ NO_x also reacts with ammonia to form ammonium nitrate, a form of PM_{2.5}. The San Joaquin Valley of California, where most factory farms and biodigesters are located, is a nonattainment area for both ozone and PM_{2.5} National Ambient Air Quality Standards. However, the Draft EIA provides only a cursory—and internally inconsistent—discussion of the potential impacts related to ozone and PM_{2.5} formation. On the one hand, the Draft EIA states the Proposed Amendments “*could* result in an overall decrease in long-term operational NO_x and PM_{2.5} emissions...in all state-designated ozone non-attainment areas from 2024 through 2046,” (emphasis added) with a corresponding reduction in health impacts.²⁶ But the Draft EIA then pivots to conclude that long-term impacts from NO_x and PM_{2.5} emissions “could be potentially significant and unavoidable.”²⁷

The Draft EIA’s conclusion that the Proposed Amendments could reduce NO_x and PM_{2.5} emissions fails to account for emissions resulting both from the increased use of digesters and the expansion of factory farms. To the extent the Draft EIA makes any attempt to acknowledge the potentially significant impacts of increased NO_x and PM_{2.5}, it does not provide any of the information required by CEQA to explain the extent and severity of these impacts. The Draft EIA’s failure to provide meaningful information about the significance of these impacts violates CEQA. *Cleveland Nat’l Forest Foundation v. San Diego Assn. of Governments* (2017) 3 Cal.5th 497, 514 (“an EIR’s designation of a particular adverse environmental effect as ‘significant’ does not excuse

²³ U.S. EPA, Understanding Global Warming Potentials”, attached as Attachment I and available at

²⁴ Id.

²⁵ Aura Science: Greenhouse effect of tropospheric ozone, NASA, attached as Attachment J and available at <https://aura.gsfc.nasa.gov/science/feature-20110403.html>

²⁶ Draft EIA, at 57.

²⁷ Draft EIA, at 62.

the EIR's failure to reasonably describe the nature and magnitude of the adverse effect"); *Berkeley Keep Jets Over the Bay Com. v. Board of Port Cmrs.* (2001) 91 Cal.App.4th 1344, 1371 ("simply labeling the effect 'significant' without accompanying analysis of the project's impacts ... is inadequate to meet the environmental assessment requirements of CEQA").

3. The Draft EIA Fails to Adequately Analyze NOx emissions from Flaring.

The Draft EIA refers to the air quality analysis in the Standard Regulatory Impact Assessment ("SRIA") as the basis for its estimates of criteria pollutants.²⁸ In the SRIA, CARB estimated emissions from flaring at digesters. The Draft EIA states that "[S]taff assumed that about 10% of methane produced is flared. Hence, flaring is the only source of local emissions used in estimating emissions from dairy biomethane."²⁹ Ammonia in flared biogas causes increased NOx emissions.³⁰ However, the SRIA only used air district emission factors for flares.³¹ Thus, the EIA fails to adequately analyze NOx emissions from flaring biogas. A revised EIA should recalculate digester flare emissions using flared biogas.

4. The Draft EIA Fails to Adequately Analyze NOx emissions from Biomethane Electric Fuel Pathways.

In its evaluation of Project-impacts related to biomethane electric vehicle fuel pathways, the Draft EIA indicates that "[T]he LCFS modeling assumes use of fuel cells to generate this electricity, which do not rely on combustion."³² Thus, staff calculate near zero NOx from electricity production of biomethane using an emission factor of 0.00085 tons/GWh.³³ However, this assumption underlying the analysis is questionable for multiple reasons. First, to date, CARB has certified only one biomethane electric vehicle fuel pathway that relies on Bloom fuel cells at a dairy to produce electricity, and that is at

²⁸ Draft EIA, at 58.

²⁹ SRIA, Appendix C-1 at B-2 Table 49.

³⁰ Attachment B, Rosenfeld Comments at 4.

³¹ SRIA, Appendix C-1 at B-2.

³² Draft EIA, at 27; SRIA, Appendix C-1 at B-3, (citing a dead link Bloom Energy (2002). *The Bloom Energy Server 5 Data Sheet*. <https://www.bloomenergy.com/wp-content/uploads/es5-300kw-datasheet-2022.pdf>).

³³ Id.

Bar 20, one of the largest dairies in California. By contrast, CARB has certified 19 biomethane electric vehicle fuel pathways that rely on internal combustion engines³⁴.

Second, Bloom fuel cells are more expensive to purchase and maintain than internal combustion engines, and the San Joaquin Valley Unified Air Pollution Control District has declined to find that fuel cells are cost-effective and thus Best Available Control Technology (“BACT”). Instead, the District has issued Authority to Construct Permits and found that internal combustion engines represented BACT. Therefore, CARB lacks substantial evidence to support its unfounded assumption Bloom fuel cells will be used for electric vehicle fuel pathways. And while Bar 20 has permits for and operates fuel cells, there is no record on the Air District public notice log of *any* BACT determination for fuel cells at Bar 20.³⁵

Furthermore, the most recent internal combustion engine Authority To Construct Permit from the San Joaquin Valley Air District found that fuel cells were not cost-effective and not BACT. Instead, the Air District required internal combustion engines as BACT.³⁶ This approach is inconsistent – on the one hand, the Air District does not consider fuel cells as BACTs or cost effective and does not require fuel cells as BACT; on the other hand, CARB’s analysis of impacts from digester projects that generate electric vehicle fuel contends that all such fuel pathways will rely on fuel cells to emit near-zero NOx.

NOx emissions from digester-related internal combustion engine used for electric vehicle fuel pathways are significant. For example, the Lakeview Dairy Biogas project in Kern County uses two internal combustion engines to produce over 1,000 kW of electricity on-site.³⁷ And this project, as permitted by the Air District with required internal combustion engines, still emits 4.58 tons/year of NOx, 1.98 tons/year of PM2.5,

³⁴ CARB: Total Number of Applications or Pathways (excel spreadsheet), February 9, 2024, attached as Attachment K.

³⁵ SJVAPCD Bar 20 Bloom Energy Permits, attached as Attachment L.

³⁶ See Attachment M - 2020.04.20 Notice of Final Action – Authority to Construct, ATC Lone Oak Energy; 2020.02.21 Notice of Preliminary Decision – Authority to Construct Lone Oak Energy at 13, Appendix C.

³⁷ SJVAPCD, Notice of Preliminary Decision – Authority to Construct (Mar. 22, 2016), [http://www.valleyair.org/notiCes/Docs/2016/03-22-16_\(S-1143770\)/S-1143770.pdf](http://www.valleyair.org/notiCes/Docs/2016/03-22-16_(S-1143770)/S-1143770.pdf), attached as Attachment N; CalEPA & Cal. Air Res. Bd., LCFS Tier 2 Pathway App. B0104 (certified TBD), attached as Attachment O and available at https://ww2.arb.ca.gov/sites/default/files/classic/fuels/lcfs/fuelpathways/comments/tier2/b0104_summary.pdf.

and 3.18 tons/year of VOC *after* the imposition of BACTs as required by the State Implementation Plan.³⁸ Compared to a natural gas combined cycle power plant in Avenal, also permitted by the Air District, the Lakeview digester project produces much higher levels of NO_x, sulfur oxides (SO_x), and VOC emissions per unit of electricity generated.³⁹ However, unlike the natural gas plant, Lakeview Dairy Biogas is not required to purchase emission reduction credits for the air pollution emitted. This facility, and others like it with internal combustion engines, emit significant levels of NO_x even after Clean Air Act-required controls.⁴⁰ Therefore, the Draft EIA wrongfully omitted analysis NO_x emissions from these facilities and fuel pathways.⁴¹

In summary, given that (a) the Proposed Amendments increase carbon intensity benchmarks, and thus credit prices, and will incentivize more pathways for electricity from internal combustion engines, (b) CARB does not require fuel cells as mitigation, and (c) the San Joaquin Valley Unified Air Pollution Control District does not consider fuel cells as BACT, it is reasonably foreseeable that more digesters with IC engines will apply for such pathway certifications. For these reasons, the Draft EIA must be revised to correct this error and to evaluate NO_x impacts from biomethane electric vehicle fuel pathways that rely on IC engines.

5. The Draft EIA Fails to Adequately Analyze NO_x emissions after 2039.

The Draft EIA fails to analyze NO_x emissions from biomethane fuel pathways after 2039, despite authorizing crediting for biomethane fuel pathways well beyond 2039. The Draft EIA's PM_{2.5} and NO_x emissions analysis explicitly relied on the Standardized Regulatory Impact Assessment ("SRIA"), including Tables 47-59.⁴² Table 47 of the SRIA assumes no hydrogen or electricity will be produced from dairy biomethane after 2039.⁴³ However, as discussed in Section I, the Proposed Amendments explicitly

³⁸ SJVAPCD, *supra* note 137, at 14.

³⁹ SJVAPCD, Notice of Final Determination of Compliance, (December 17, 2010) Project Number: C-1100751 – Avenal Power Center LLC (08-AFC-01), attached as Attachment P.

⁴⁰ *Id.*; Attachment Q Comparison of Digester vs. Avenal; and Rosenfeld Comments at __.

⁴¹ Johns Hopkins, Center for a Livable Future comments LCFS Amendments; Petition for Reconsideration at 28-30, attached as Attachment R.

⁴² Draft EIA, at 58.

⁴³ CARB Staff Report: Initial Statement of Reasons for Proposed Amendments to the Low Carbon Fuel Standards, Appendix C-1: Standardized Regulatory Impact Assessment, at B-3 (September 9, 2023) ("SRIA").

authorize CARB to certify electricity and hydrogen fuel pathways well beyond 2039. The Draft EIA's analysis of NOx emissions is grounded on an inaccurate assumption. The Draft EIA must evaluate the impacts of NOx emissions over the time period during which these emissions will occur. 14 Cal. Code Regs. § 15126 (“[a]ll phases of a project must be considered when evaluating its impact on the environment”); *Make UC a Good Neighbor v. Regents of University of California* (2023) 88 Cal.App.5th 656, 667; *In re Bay-Delta etc.* (2008) 43 Cal.4th 1143, 1169.

6. The Draft EIA fails to adequately analyze Project-related ammonia emissions associated with digestate.

Aside from omitting analysis of the impacts resulting from factory farm expansion and use of anaerobic digesters described above, the Draft EIA presents an incomplete analysis of the project's ammonia impacts because it fails to evaluate the impacts from production and application of substantial increases of anaerobic digestate.⁴⁴ Apart from the size of the herd, the production and application of digestate to agriculture land is much more polluting and more hazardous to public health compared to raw manure.⁴⁵ CEQA requires an analysis of these impacts.

The Draft EIA's conclusion that the Project may have significant air quality impacts—without consideration of the extent and severity of those impacts—cannot cure this deficiency. Merely stating that an impact will occur is insufficient; an EIR must also provide “information about how adverse the adverse impact will be.” *Cleveland Nat'l Forest Foundation*, 3 Cal.5th at 514; *Berkeley Keep Jets Over the Bay Com.*, 91 Cal.App.4th at 1371. This information, of course, must be accurate and consist of more than mere conclusions or speculation. *Id.* The Draft EIA's analysis of air quality impacts fails to fulfill this mandate in several instances.

(a) Air pollution

Anaerobic digestate results in higher emissions in part because anaerobic digestion decomposes the waste into smaller molecules, which allows it to more easily volatilize into the atmosphere.⁴⁶ In this way, digestate results in significant releases of higher

⁴⁴ Draft EIA at 56-62 (concludes impacts to air quality are significant); at 64-65 (concludes impacts from odor are not significant); Attachment B, Rosenfeld comments, at 2 and 3.

⁴⁵ Johns Hopkins Center for a Livable Future comments on LCFS Amendments at 2.

⁴⁶ Attachment B, Rosenfeld comments, at 3.

amounts of ammonia, a toxic gas, and NO_x emissions than unprocessed manure.⁴⁷ The Draft EIA concludes that long-term operational air quality impacts related to PM_{2.5} and NO_x would be significant and unavoidable.⁴⁸ We do not disagree that the Project's emissions would be significant. However, the DEIR fails to disclose the extent and severity of this impact.⁴⁹ A revised analysis must provide more details about the impacts and must account for increased application of digestate on agricultural land. *Cleveland Nat'l Forest Foundation*, 3 Cal.5th at 514; *Berkeley Keep Jets Over the Bay Com.*, 91 Cal.App.4th at 1371.

Furthermore, the Draft EIA's conclusion that odor impacts from ammonia emissions would not be significant is unsupported. As explained in the Rosenfeld Comments, ammonia emits a strong odor that is easily detectable at low concentrations and contributes to irritation such as immediate burning of the nose and respiratory tract.⁵⁰ In addition, anaerobic digestion significantly increases the amount of ammonia emissions compared to a dairy without an anaerobic digester.⁵¹

As discussed above, ammonia also contributes to the formation of PM_{2.5} (e.g., formation of ammonium nitrate), exposure to which is linked to a variety of serious health problems).⁵² CARB's own ammonia data show that ammonia contributes to PM_{2.5} formation.⁵³ Therefore, CARB must include a full evaluation of ammonia emissions.

(b) Public Health and Safety

Health and safety effects, including adverse health impacts from air pollutants, may constitute significant environmental impacts for the purposes of CEQA. See, e.g., *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502, 517-22; *Bakersfield Citizens for*

⁴⁷ *Id.*

⁴⁸ Draft EIA at 62.

⁴⁹ Draft EIA at 56-62.

⁵⁰ Rosenfeld Comments at 2.

⁵¹ *Id.* at 3-4.

⁵² Johns Hopkins Center for a Livable Future comments on LCFS Amendments comments at 3; See Attachment H <https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm#:~:text=Numerous%20scientific%20studies%20have%20linked%20particle%20pollution%20exposure,irritation%20of%20the%20airways%2C%20coughing%20or%20difficulty%20breathing>.

⁵³ 2023 CARB Ammonia Demonstration re 1997 PM_{2.5} plan standard SJV at 3, attached as Attachment S.

Local Control v. City of Bakersfield (2004) 124 Cal.App.4th 1184, 1219-21. 14 CCR § 15126.2(a). Here, as discussed above, in the anaerobic digestion process substantial amounts of ammonia are produced as a byproduct.

In addition to the health risks imposed by increased local emissions, emissions and impacts on nearby communities, ammonia also contributes to the formation of PM_{2.5}.⁵⁴ In the United States, ammonia from agriculture accounts for the formation of almost one third of PM_{2.5}.⁵⁵ Exposure to PM 2.5 is linked to premature deaths in people with heart or lung disease, heart attacks, irregular heartbeat, aggravated asthma, decreased lung function and long-term lung conditions including cancer.⁵⁶ Yet, the Draft EIA's analysis of the Project's public health and safety impacts is cursory.⁵⁷ While the Draft EIA discloses that an increase in emissions of criteria pollutants associated with production of biofuels is possible, it falls short of actually evaluating the potential health impacts of these emissions.⁵⁸ Instead, once again the Draft EIA concludes that impacts would be significant, but then fails to describe the severity of those impacts.

Harmful emissions from expanded use of anaerobic digesters disproportionately affect communities in close proximity to dairies, which are often comprised of lower-income residents. Lower-income residents are often more vulnerable to the adverse effects of these emissions due to various factors, such as lack of resources, inadequate infrastructure, and the concentration of anaerobic digester facilities near these populations.

(c) Impacts Outside of California

The Draft EIA fails to analyze the Proposed Amendments' impacts outside of California. CEQA requires public agencies to analyze the potentially significant impacts of a proposed project that may occur in "the area which will be affected by [the] proposed project." 14 Cal. Code. Regs. § 15360; Public. Res. Code § 21060.5. CARB itself acknowledged its obligation to analyze out-of-state impacts in conducting its CEQA

⁵⁴ Id.

⁵⁵ Id.

⁵⁶ See Attachment H; <https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm#:~:text=Numerous%20scientific%20studies%20have%20linked%20particle%20pollution%20exposure,irritation%20of%20the%20airways%2C%20coughing%20or%20difficulty%20breathing.>

⁵⁷ Draft EIA, at 61 and 62.

⁵⁸ Id.

review for the Renewable Electricity Standard in 2010.⁵⁹ Factory farms across the nation are eligible for LCFS credits, and are thus incentivized by the Proposed Amendments to install anaerobic digesters and expand existing herds, just as in-state factory farms are. The Proposed Amendments will therefore have adverse environmental impacts out-of-state. CARB's refusal to analyze such impacts is clear legal error.

7. The Draft EIA fails to adequately analyze Project-related discharges to groundwater associated with digestate.

The Draft EIA's analysis of increased digestate on groundwater is equally flawed. As explained in the Rosenfeld Comments, anaerobic digestion breaks down waste into a digestate of smaller molecules that makes digestate more susceptible to leaching into the groundwater.⁶⁰ Anaerobic digestion also leads to higher concentrations of ammonia in digestate, which can subsequently convert to nitrate.⁶¹

"[N]itrate pollution leading to groundwater contamination is much more likely to occur with anaerobically digested digestate, as the ammonia is more readily available for conversion into nitrate, which can then leach into groundwater."⁶² Nitrate contamination in drinking water and food can lead to severe illness in infants, such as the onset of blue baby syndrome, also known as methemoglobinemia.⁶³ Yet, the Draft EIA fails to include any analysis of these potential impacts.

Although the Draft EIA concludes that the Project's long-term operational impacts to water quality are significant and unavoidable, the document lacks a thorough analysis of these impacts. As the Rosenfeld Comments explain, increased amounts of digestate have the potential to result in groundwater nitrate contamination, excessive accumulation of soil phosphorus, and eutrophication of surface waters from anaerobic digesters.⁶⁴ These impacts to water quality and public health must be evaluated in a revised EIA.

⁵⁹ California Air Resources Board, Functional Equivalent Document for the Renewable Electricity Standard, at E-77, E-82, E-83, E-105, E-107, E-108 (June 2010), attached as Attachment T and available at <https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2010/res2010/res10e.pdf>.

⁶⁰ Attachment B at 5.

⁶¹ Id.

⁶² Attachment B at 5 and 6.

⁶³ Id.

⁶⁴ Id. at 7.

In summary, the Draft EIA fails to grapple with an analysis of all of the foreseeable, significant, direct and indirect environmental impacts of implementing the Proposed Amendments. As discussed above and in several comment letters from other stakeholders, these impacts include, but are not limited to significant air quality, climate change, water quality, and public health impacts. Furthermore, as discussed below, the Draft EIA fails to identify feasible mitigation measures to minimize acknowledged significant impacts resulting from the project. A revised EIA must correct these deficiencies in order for the public and decision-makers to fully understand the Project's impacts.

III. The Draft EIA fails to identify any enforceable mitigation measures to lessen the severity of the Proposed Amendments' significant impacts.

If, as here, a lead agency determines its project will have one or more significant environmental effects, CEQA requires that agency to adopt all feasible mitigation measures to reduce the severity of those impacts. Public. Res. Code § 21002; *Sacramento Old City Assn. v. City Council* (1991) 229 Cal.App.3d 1011, 1027; *POET, LLC*, 218 Cal.App.4th at 734-35. Mitigation can take many forms, including avoiding the impact altogether by not taking a certain action or parts of an action and minimizing impacts by limiting the degree or magnitude of the action and its implementation. 14 Cal. Code Regs., § 15370. Mitigation measures are only legally valid if they are fully enforceable. Public Res. Code § 21081.6(b); *Assn. of Irrigated Residents v. Kern County Bd of Supervisors* (2017) 17 Cal.App.5th 708, 752.

The Draft EIA's approach to mitigation measures is woefully deficient. CARB has not proposed *any* enforceable mitigation measures to be incorporated as part of the Proposed Amendments. The Draft EIA's reasoning for doing so is based on a fundamental legal error. Because CARB has no authority over the projects and actions that will be undertaken in response to the Proposed Amendments, the Draft EIA asserts that CARB has no obligation to incorporate feasible mitigation measures into the Proposed Amendments themselves. CARB does have jurisdiction over the Proposed Amendments, and it must include measures that will reduce or eliminate the reasonable foreseeable impacts of the Amendments. 14 Cal. Code Regs. § 15126.4.

The Draft EIA's illogical reasoning is compounded by its unsupported assumption that the projects it identifies as reasonably compliance responses will be subject to future CEQA review. Factory farm expansions and digester installations are commonly considered exempt from CEQA review by the local agencies in Central Valley that routinely approve such projects. The Leadership Counsel proposes numerous feasible mitigation measures CARB can, and must, incorporate into the Proposed Amendments to

lessen the severity of its significant impacts associated with digester installation and factory farm expansion.

1. The Draft EIA’s approach to mitigation measures is legally erroneous.

CARB has not proposed *any* enforceable mitigation measures, despite the Draft EIA concluding that the Proposed Amendments will have numerous significant environmental impacts. According to the Draft EIA, CARB—one of the most powerful regulators in the State—has no ability or authority to mitigate the impacts associated with the Proposed Amendments. In attempting to off-load its obligation to impose feasible mitigation measures, CARB confuses the project before it—the Proposed Amendments—with the projects (e.g. anaerobic digesters, factory farm expansions) that will be undertaken *as a result* of the Proposed Amendments. Because CARB does not have authority over these projects, the Draft EIA asserts CARB has no ability to incorporate feasible mitigation measures within the Proposed Amendments.

However, CEQA requires CARB to determine whether changes or additions can be made to the *Proposed Amendments themselves* that will reduce the severity of their significant environmental impacts. 14 Cal. Code Regs. § 15126.4(a)(2) (“[i]n the case of the adoption of a plan, policy, regulation, or other public project, mitigation measures can be incorporated into the plan, policy, regulation, or project design”). CARB clearly has the authority to make changes or additions to its own Proposed Amendments, which will lessen the severity of their environmental impacts. Its failure to even consider doing so constitutes grave legal error.

2. CARB’s EIA process is likely the last opportunity for environmental review and mitigation of the impacts of factory farm expansion and digester installation.

CARB’s faulty reasoning is compounded by its unsupported assumption that the projects which will be undertaken as a result of the Proposed Amendments will be subject to future CEQA review and, thus, the obligation to mitigate significant impacts. However, in the Central Valley, where factory farms are predominately located, the installation of anaerobic digesters and the expansion of factory farms are commonly considered by local agencies to be exempt from CEQA review on the grounds that the projects are ministerial or qualify for a categorical exemption. Therefore, with respect to these projects, the Draft EIA process is likely the last stop for both detailed environmental review and the imposition of meaningful mitigation measures.

For example, Kings County has adopted local guidelines that inform its implementation of CEQA.⁶⁵ Included in these guidelines are a list of categories of projects that are exempt from CEQA review because they are subject to ministerial review. These ministerial projects include “Site Plan Reviews.” In 2023 alone, Kings County approved two anaerobic digester projects, exempting them from CEQA review on the grounds they were subject to ministerial review.⁶⁶ Kings County thus had no obligation under CEQA to analyze and mitigate the adverse impacts associated with either of these projects.

Other jurisdictions have exempted digester projects from CEQA review—and the obligation to mitigate significant impacts—on the grounds that these projects qualify for a Categorical Exemption. For example, Tulare County issued a Notice of Exemption in 2020 for a pipeline construction project intended to transport dairy biogas on the grounds the project qualified for the Class 1 (minor alterations to existing facilities) and Class 3 (new construction of small structures) Categorical Exemptions.⁶⁷ Tulare County also filed a Notice of Exemption to expand an existing biogas pipeline to connect an additional dairy digester to existing infrastructure. Other jurisdictions where similar projects have been exempted from CEQA review recently include Merced, Stanislaus, and Kern.

Tulare County also filed multiple Notices of Exemption in 2022 for factory farm herd consolidation projects, including a project that increased an existing herd size by

⁶⁵ Kings County, *Local Guidelines for the Implementation of CEQA*, (January 5, 2016), attached as Attachment U and available at <https://www.countyofkings.com/home/showpublisheddocument/12485/635919879294330000>.

⁶⁶ Kings County Notice of Exemption for Felicita Dairy Anaerobic Digester Project (December 7, 2023), attached as Attachment V and available at https://files.ceqanet.opr.ca.gov/293555-1/attachment/CDzMvjy1XpNztMTMZYB397RSIELw_rWgq8tiJxKcc3SF7-nLFEGELbQwM06hiwOeTZEiJUHu6gqHLBNx0; Kings County Notice of Exemption for Countryside Dairy Anaerobic Digester Project (May 15, 2023), attached as Attachment W and available at https://files.ceqanet.opr.ca.gov/287881-1/attachment/q5K_P65aU7RUja-BYGe9-uDeE-Fz0Az_DABus84Q28vqdXyG1cceIHq937esHc4jb7WmtPLcv9qGvzOn0.

⁶⁷ Tulare County Notice of Exemption for Tulare Biogas Gathering Line (August 18, 2020), attached as Attachment X and available at <https://files.ceqanet.opr.ca.gov/264014-2/attachment/ZQ976ZUWit1klndpB1s5MYMKZJQBpo6c-8VIweVKasCVOsmAyGVogK05MqqmSLuQk994sssNab-A3-7Q0>.

almost 3,000 animal units.⁶⁸ Kings County filed a Notice of Exemption for a project that expanded the herd size of an existing calf ranch in 2023 on the grounds that the underlying approval was ministerial.

CARB's attempt to justify its refusal to adopt any enforceable mitigation measures on the grounds that the projects incentivized by the Proposed Amendments will be subject to future CEQA review fails. CARB's discretionary approval of the Proposed Amendments is likely the last chance to rigorously analyze and mitigate the significant impacts associated with many future factory farm expansions and digester development projects. CARB must use its authority as the regulatory agency tasked with crafting the LCFS to ensure all identified significant impacts are mitigated to the extent feasible.

3. CARB must adopt feasible mitigation measures that will lessen the severity of the Proposed Amendments' impacts on factory farm expansion and digester installation.

CEQA explicitly acknowledges that feasible mitigation measures can include changes that are incorporated into the regulation itself. 14 Cal. Code Regs. § 15126.4(a)(2). Each of the following mitigation measures is feasible and within CARB's authority to incorporate within the Proposed Amendments; CARB's failure to do so would constitute a clear violation of CEQA:

- Limit the generation of credits for fuel pathway holders for biogas derived from livestock manure to the volume of feedstock at each associated dairy or livestock operation on January 1, 2017, or on the date the pathway was certified, whichever is earlier.
- Restrict the generation of credits for fuel pathway holders for biogas derived from livestock manure located in Disadvantaged Communities as designation by the Office of Environmental Health Hazard Assessment pursuant to Senate Bull 535.⁶⁹
- When calculating the carbon intensity of fuel derived from livestock manure, include all emissions of greenhouse gases generated from the production of the

⁶⁸ Cows, pigs, and other animals raised in factory farms and dairies are not "units," but are sentient beings, each of which has its own unique personality.

⁶⁹ An interactive map delineating the Disadvantaged Communities throughout the State is available at <https://oehha.ca.gov/calenviroscreen/sb535>. A copy of the state-wide map is attached as Attachment Y.

- fuel and all emissions of greenhouse gases generated from the production of the feedstock. Update the carbon intensity of each pathway for fuel derived from livestock manure after making this calculation. These emissions include, but are not limited to,
- o Enteric emissions;
 - o Emissions from production and storage of feed, transport of feedstock, or fuel;
 - o Emissions resulting from digestate handling, composting, or treatment; and
 - o Emissions resulting from land application of manure or digestate.
- Disapprove any application for a fuel pathway that includes the use of biogas derived from livestock manure which does not provide all information and calculations used to determine carbon intensity, including but not limited to:
 - o Herd size;
 - o Volume of feedstock produced or used;
 - o Volume of biogas produced.
 - Make publicly available on CARB's website all information and calculations used to determine carbon intensity.

IV. The Draft EIA fails to analyze all reasonable alternatives by which the State can achieve its methane reduction goals.

As a preliminary matter, the Draft EIA's failure to disclose the extent and severity of the Project's broad-ranging impacts necessarily distorts the document's analysis of Project alternatives. As a result, the alternatives are evaluated against an inaccurate representation of the Project's impacts. Proper identification and analysis of alternatives is impossible until Project impacts are fully disclosed.

CEQA requires CARB's Draft EIA to describe a range of "reasonable alternatives to the project," which would "attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effect of the project," and evaluate the "comparative merits" of the alternatives. 14 Cal. Code. Regs. § 15126.6. The discussion

of mitigation and alternatives is “the core” of CEQA analysis. *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564.

The Draft EIA’s alternatives analysis presents a series of false choices, that rests on the assumption that the only method by which the State can achieve its methane emissions reduction goals is through the LCFS’s indirect, incentive-based regulation. Each alternative scenario is simply a version of the LCFS with different requirements than the Proposed Amendments. The Draft EIA fails to analyze a scenario where CARB uses its regulatory authority to directly regulate methane emissions from factory farms, as required by Health & Safety Code §§ 38562.5, 39730.7(b)(1), thereby achieving the State’s methane reduction goals while reducing the incentive for factory farms to expand their environmentally damaging operations.

The Draft EIA must be amended to include analysis of an alternative scenario with the following components: (1) elimination of LCFS credits for fuel derived from manure methane emissions; (2) implementation of direct regulation of factory farms to achieve the same level of methane reduction CARB currently contemplates will be achieved through the LCFS; and (3) decrease the stringency of the LCFS’ carbon intensity requirement, to ensure the elimination of credits for fuel derived from manure methane emissions does not affect credit prices negatively and risk the State failing to achieve its fuel decarbonization goals.

The State Legislature has granted CARB the regulatory authority to directly regulate the major sources of methane emissions within the State, including the dairy and livestock industry, landfills, and the oil and gas system. To date, CARB has taken action to directly regulate landfills (the Landfill Methane Regulation, Cal. Code of Regs., tit. 17 §§ 95460, et seq.) and the oil and gas system (the Oil and Gas Methane Regulation, Cal. Code of Regs., tit. 17, §§ 95665-77). However, CARB has yet to directly regulate the dairy and livestock industry—the largest source of methane emissions within the State.

The State Legislature, through Senate Bill 1383, mandated that CARB adopt regulations and mandated that CARB implement such regulations beginning in January of 2024 provided that CARB make certain findings. As CARB itself has stated, the agency shall adopt regulations and has authority to implement the regulations, “provided that CARB, in consultation with CDFA, determine the regulations are technologically and economically feasible, cost-effective, include provisions to minimize and mitigate

potential leakage, and include an evaluation of the achievements made by incentive-based programs.”⁷⁰

CARB itself acknowledged in its 2022 Scoping Plan that direct regulation of the sources of methane emissions is integral to the State’s methane emissions reduction strategy.⁷¹ CARB’s stated strategy for reducing the emissions of short-lived climate pollutants, most notably methane, is a “carrot-then-stick” approach.⁷² This approach begins with the incentive-based, indirect regulations, such as the LCFS (the “carrot”), and then transitions into direct regulation, similar to those that have been promulgated for the landfill and oil and gas systems (the “stick”). The 2022 Scoping Plan ultimately recommends the carrot and stick approach for manure methane.⁷³ CARB acknowledged that the dairy and livestock industry must “achieve considerable methane emissions reductions to meet the 2030 target,” which will “require implementation of additional methane emissions reductions strategies.”⁷⁴

Despite having the mandatory duty and authority to directly regulate methane emissions from the dairy and livestock industry, and explicitly stating that such regulation is integral to the State’s emissions reduction strategy, CARB fails to analyze an alternative scenario where this direct regulatory authority is applied. The only alternatives CARB considers are those where the LCFS is the primary, if not sole, mechanism for achieving methane emissions reductions from the dairy and livestock industry. CARB has the authority to simultaneously reduce the methane emissions and adverse environmental impacts from factory farms, while not risking the State’s fuel decarbonization goals. CARB’s failure to consider such a scenario constitutes clear legal error.

⁷⁰ California Air Resources Board, Analysis of Progress Toward Achieving the 2030 Dairy and Livestock Sector Methane Emissions Target, at ES-4 (March 2022), attached as Attachment Z and available at <https://ww2.arb.ca.gov/sites/default/files/2022-03/final-dairy-livestock-SB1383-analysis.pdf>.

⁷¹ California Air Resources Board, 2022 Scoping Plan, at 222-25 (2022), attached as Attachment AA and available at <https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf>.

⁷² *Id.* at 223.

⁷³ *Id.* at 232.

⁷⁴ CARB, Analysis of Progress Toward Achieving 2030 Methane Emissions Target, at ES-6.

V. Conclusion

Due to the foregoing and numerous adverse environmental impacts not fully disclosed and properly analyzed in the Draft EIA, the Leadership Counsel opposes the Project as proposed. Additional alternatives and mitigation measures are essential to avoid the Project's significant adverse impacts. The Leadership Counsel respectfully urges the Air Resources Board to delay further consideration of this Project until the agency recirculates a revised Draft EIA that fully complies with CEQA and the CEQA Guidelines.

Very truly yours,

SHUTE, MIHALY & WEINBERGER LLP



Ellison Folk

Attachments:

Attachment A: Comments of Silvia Secchi, Ph.D., Professor, Department of Geographical and Sustainability Sciences, University of Iowa

Attachment B: Comments of Paul Rosenfeld, Ph.D., Principal Environmental Chemist, Soil Water Air Protection Enterprise

Attachment C: Aaron Smith, "Cow poop is now a big part of California Fuel Policy", UC Davis, Jan. 22, 2024.

Attachment D: U.S. Department of Agriculture, 2017 Census of Agriculture – State Data, Table 17. Milk Cow Herd Size by Inventory and Sales: 2017 and Table 17. Milk Cow Herd Size by Inventory and Sales: 2022

Attachment E: Briefing paper: Factory Farm Dairies, Biogas, and the Dangerous Path California is On, Leadership Counsel for Justice and Accountability, 2023.

Attachment F: U.S. EPA, “Health Effects of Ozone Pollution”;
<https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution#:~:text=Depending%20on%20the%20level%20of%20exposure%2C%20ozone%20can%3A,diseases%20such%20as%20asthma%2C%20emphysema%2C%20and%20chronic%20bronchitis.>

Attachment G: 87 Fed. Reg. 60494 (Oct. 5, 2022) (proposed disapproval of plan to attain the 2012 annual PM_{2.5} standard).

Attachment H: U.S. EPA, Health and Environmental Effects of Particulate Matter,
<https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm#:~:text=Numerous%20scientific%20studies%20have%20linked%20particle%20pollution%20exposure,irritation%20of%20the%20airways%2C%20coughing%20or%20difficulty%20breathing>

Attachment I: U.S. EPA, Understanding Global Warming Potentials;
<https://www.epa.gov/ghgemissions/understanding-global-warming-potentials>

Attachment J: Aura Science: Greenhouse effect of tropospheric ozone, NASA,
<https://aura.gsfc.nasa.gov/science/feature-20110403.html>

Attachment K: CARB: Total Number of Applications or Pathways (excel spreadsheet), February 9, 2024.

Attachment L: SJVAPCD Bar 20 Bloom Energy Permits

Attachment M: Notice of Final Action – Authority to Construct, ATC Lone Oak Energy; 2020.02.21 Notice of Preliminary Decision – Authority to Construct Lone Oak Energy

Attachment N: SJVAPCD, Notice of Preliminary Decision – Authority to Construct Lakeview Dairy Biogas (Mar. 22, 2016),
[http://www.valleyair.org/notices/Docs/2016/03-22-16_\(S-1143770\)/S-1143770.pdf](http://www.valleyair.org/notices/Docs/2016/03-22-16_(S-1143770)/S-1143770.pdf).

Attachment O: CalEPA & Cal. Air Res. Bd., LCFS Tier 2 Pathway App. B0104 Lakeview Dairy Biogas(certified TBD),
https://ww2.arb.ca.gov/sites/default/files/classic/fuels/lcfs/fuelpathways/comments/tier2/b0104_summary.pdf

Attachment P: Notice of Final Determination of Compliance, Avenal Power Center, at 3, 27 (Dec. 17, 2010)

Attachment Q: Digester v. Avenal Comparison

Attachment R: Excerpt from Petition for Reconsideration Of The Denial Of The Petition For Rulemaking To Exclude All Fuels Derived From Biomethane From Dairy And Swine Manure From The Low Carbon Fuel Standard Program

Attachment S: 2023 CARB Ammonia Demonstration re 1997 PM2.5 plan standard SJV.

Attachment T: Excerpts of CARB Functional Equivalent Document for Renewable Electricity Standard, June 2010.

<https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2010/res2010/res10e.pdf>

Attachment U: Kings County, *Local Guidelines for the Implementation of CEQA*, January 5, 2016.

Attachment V: Kings County Notice of Exemption for Felicita Dairy Anaerobic Digester Project, December 7, 2023.

Attachment W: Kings County Notice of Exemption for Countryside Dairy Anaerobic Digester Project, May 15, 2023.

Attachment X: Tulare County Notice of Exemption for Tulare Biogas Gathering Line, August 18, 2020.

Attachment Y: OEHHA SB 535 Disadvantaged Communities Map,
<https://oehha.ca.gov/calenviroscreen/sb535>.

Attachment Z: California Air Resources Board, Analysis of Progress Toward Achieving the 2030 Dairy and Livestock Sector Methane Emissions Target (March 2022),
<https://ww2.arb.ca.gov/sites/default/files/2022-03/final-dairy-livestock-SB1383-analysis.pdf>.

Attachment AA: California Air Resources Board, 2022 Scoping Plan
<https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf>.