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Austin Hicks, Air Pollution Specialist
Ariel Fideldy, Manager
California Air Resources Board
Electronic Submittal: http://www.arb.ca.gov/lispub/comm/bclist.php

RE: Draft Environmental Analysis for the Proposed 2022 SIP

Dear Mr. Hicks and Ms. Fideldy,

On behalf of the members of the California Council for Environmental and Economic Balance (CCEEB), we submit the following comments on the California Air Resources Board (CARB) draft Environmental Analysis (draft EA) for the 2022 State Strategy for the State Implementation Plan (2022 SIP). CCEEB members manage and operate numerous sources of criteria pollutant emissions across the state, and have a long, shared history working with CARB to reduce all types of emissions and exposures from industry, energy, and transportation systems, as well as consumer products and other area sources.

Many CCEEB members are also at the forefront of efforts to transition California to a carbon neutral economy, including public and private utilities, fuel and transportation energy producers, power generators, and many other providers of essential public services. In addition to our engagement with CARB on both the 2022 SIP and the 2022 Scoping Plan, CCEEB is also active at the South Coast Air Quality Management District (SCAQMD) on its preparation of the 2022 Air Quality Management Plan (AQMP) to meet the federal 2015 8-hour ozone standard. It is from this perspective that we offer these comments on the draft EA.

The Draft EA Fails to Meet the Basic Purpose of CEQA, Even If Legally Defensible

Guidelines for the implementation of the California Environmental Quality Act (CEQA) state that the basic purposes of CEQA review are to (1) inform decision makers and the public about potential significant environmental effects that could occur from a project, (2) identify ways to avoid or reduce damage, (3) prevent significant but avoidable damage through the use of alternatives and mitigation measures, and (4) disclose to the public reasons why an agency might approve a project even if it results in significant environmental effects.[1] While CCEEB has no doubt that CARB's counsel is well versed on CEQA case law and statutory requirements for environmental review, we wonder if the simple intent of CEQA – to inform decision makers and

[1] See California Code of Regulations, Title 14, Division 6, Chapter 3, Article 1.

the public about possible tradeoffs, and discuss, in earnest, ways to avoid or mitigate harm – has been lost over time. Put simply, we did see not a clearly articulated discussion of the very real and potentially significant environmental questions related to the 2022 SIP, despite the more than three hundred pages of carefully worded text and tables. This may pass legal muster and judicial review; however, it does not seem meaningful to decision makers or the public. Problems with CARB's environmental review can be put into two general buckets: key environmental questions that largely go unanswered, and general assumptions that are questionable or lack rigor and data. Put together, CCEEB believes these limitations detract from the usefulness of the draft EA and fail to meet the basic purpose of CEQA. We provide some examples to help illustrate our point.

Examples of Key Questions that Go Largely Unanswered

Battery Recycling and Mining Metals

Perhaps the most obvious example can be seen in CARB's limited review of the impact from the increased demand for batteries, which results from measures to electrify combustion sources, like heavy-duty vehicles, cargo handling and off-road equipment. Here we note that CCEEB supports California's climate and carbon neutrality goals, and recognizes that deploying electric batteries across many applications will be a critical part of achieving those goals. However, we believe that California should avoid, as much as possible, creating tomorrow's environmental problem as we try to solve the problems of today. In terms of batteries, this means addressing the whole spectrum of potentially significant impacts that can occur from mining to recycling.

Although the draft EA does acknowledge, in general terms, issues related to mining and recycling, it largely absolves CARB and the State from responsibility by citing jurisdictional boundaries, even though it will be CARB mandates that require the shift to batteries and fuel cells in the first place. The only mitigation measures offered are an explanation that any battery recycling or heavy metal mining operation in California would be subject to project-level CEQA review by a local lead agency, and that any remaining impacts are unavoidable.

> *"Because the authority to determine project-level impacts and require project-level mitigation lies with land use and/or permitting agencies for individual projects, and the programmatic level of analysis associated with this Draft EA does not attempt to address project-specific details of mitigation, there is inherent uncertainty in the degree of mitigation that may ultimately be implemented to reduce potentially significant impacts. Although unlikely after implementation of Mitigation Measure 9-2, it is possible that significant impacts related to hazards and hazardous materials could still occur.*
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> *"Consequently, while impacts could be reduced to a less than significant level with mitigation measures imposed by the land use and/or permitting agencies acting as lead agencies for these individual projects under CEQA, if and when a project proponent seeks a permit for compliance-response related project, this Draft EA takes the conservative approach in its post-mitigation significance conclusion and discloses, for CEQA*

> *compliance purposes, that the potential long-term operation-related impacts regarding hazards and hazardous materials associated with the 2022 State SIP Strategy would remain potentially significant and unavoidable."*[2]

Strikingly, no mention is made of either AB 1125 (Pavley, 2005), the Rechargeable Battery Recycling Act, or AB 2832 (Dahle, 2018), which established the Lithium-Ion Battery Recycling Advisory Group at CalEPA, and certainly no mention is made of California's responsibility for mining impacts that occur outside the state, which if poorly managed can lead to severe local environmental outcomes and increased GHG emissions.[3] Importantly, the AB 2832 advisory group is in the final stages of drafting recommendations for end-of-life (EOL) policies for lithium-ion batteries, with a particular focus on batteries used in electric vehicles. Table 2 of the draft report lists lithium-ion recyclers in North America, including those planned for development, noting that, "As EVs have not yet retired at a large scale, the feedstock for these facilities is primarily production scrap from manufacturing and consumer electronics."[4] Not one is in California, suggesting that many if not most of California's battery recycling will occur somewhere else and that the state will export its environmental impacts. As the draft report concluded, "Since EVs are not currently being retired at a large scale, California does not currently have the needed capacity in terms of trained personnel to handle high voltage batteries. Lack of infrastructure in California could encourage EV battery retirement in other states or international export."[5]

CCEEB's point here is that the discussion in the draft EA does very little to illuminate the very real challenges inherent to ramping up use of rechargeable batteries, and provides CARB decision makers and the public with no sense of the options or alternatives that could potentially help mitigate the problem. It also seems to assume that new facilities could somehow be permitted in California to meet the state's need for battery recycling, ignoring the more likely scenario that California would simply export its problem elsewhere.[6] Similarly, impacts from mining happen elsewhere and, as such, are outside of CARB's requirements for

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[2] See "2022 State Strategy for the State Implementation Plan: Draft Environmental Analysis," pages 74-75 and pages 78-79. Nearly identical language is used for Mitigation Measures 9-1 (short term) and 9-2 (long term).
[3] https://www.iea.org/reports/the-role-of-critical-minerals-in-clean-energy-transitions/sustainable-and-responsible-development-of-minerals
[4] AB 2832 Advisory Group Draft Report, revised March 11, 2022, pages 17-19. Accessed online at https://calepa.ca.gov/wp-content/uploads/sites/6/2022/03/AB-2832-Final-Draft-Policy-Recommendations-Lithium-ion-Car-Battery-Recycling-Advisory-Group-As-of-3-11-22.a.hp_.pdf#page=1 on May 5, 2022.
[5] Ibid, page 34.
[6] Lead acid batteries are also used in battery electric vehicles and pose their own EOL problems. The now shuttered Exide battery recycling facility in Vernon became one of the state's largest industrial cleanup sites in California, costing tax payers hundreds of millions of dollars and causing one of the worst environmental injustices in recent memory. After the closure of Exide, Quemetco in the City of Industry remains the only lead acid battery recycling facility west of the Rockies, and itself is under close scrutiny by impacted communities and regulators. If nothing else, the history of these facilities serves as an example of how permitting new battery recycling facilities could face serious challenges and community opposition.

CEQA review, and other impacts, such as increased fire risks and illegal disposal, are not mentioned at all.[7]

CARB's Actions Foretell and Require Additional Analysis on Electrification

Control measures in the 2022 SIP that seek to electrify sources of combustion in California will necessarily lead to major and significant infrastructure development that need to be analyzed as part of the draft EA. These include measures affecting heavy-duty vehicles, transport refrigeration units, cargo handling equipment, off-road vehicles and equipment, locomotives, and residential and commercial space and water heaters. The choice by CARB to require electrification directly leads to more demand, which in turn leads to the development of solar and wind projects in the state, which then lead to reasonably foreseeable environmental impacts. These can't be ignored under CEQA.

However, the draft EA asserts that CARB neither knows where specific projects will be located, nor does it have authority over these projects. "Because CARB cannot predict the location, design, or setting of specific projects that may result and does not have authority over implementation of development that may occur, the programmatic analysis in the Draft EA does not allow for identification of the precise details of project-specific mitigation." CCEEB disagrees with this assertion, and notes that modeling done by CARB contractors E3 for its Scoping Plan includes multiple studies laying out fairly specific areas in California that wind and solar and infrastructure for ZEVs will be deployed.

CCEEB is concerned that CARB has made no attempt to quantify the levels of increased electricity demand, or how many additional generation, distribution, or transmission assets may be needed to facilitate the increased electricity demand that will surely stem from implementation of the Project, or how the actual construction or relocation of such assets could impact the environment. Using the Scoping Plan's high electrification scenario as an example, new solar arrays and wind power farms will need to be fabricated, transported to, and installed throughout California at more than five times the historical rate of deployment every year for the next 25 years.[8] This deployment will significantly impact the physical environment in all California communities throughout the state. The fabrication, transportation and construction of the required generation facilities will also generate GHG emissions in and

[7] In addition to the work by the AB 2832 Advisory Group to understand EOL issues, CARB should also review data from the Department of Toxic Substances Control on the recycling of consumer rechargeable batteries. This shows that rates of recycling have declined since 2016, when data first began being collected. See https://dtsc.ca.gov/how-is-california-doing-with-recycling-rechargeable-batteries.

[8] See the September 19, 2019 comments from the Clean Air Task Force to the California Energy Commission on the SB 100 Joint Agency Report, "Charting a Path to 100% Clean Energy Future. The Task Force explains that to meet its climate goals with renewable power alone, California would need to deploy new solar and wind generation at five times the state's historical rate every year for the next quarter century and install "the equivalent of nearly ten of the world's largest onshore or offshore windfarms every year." Accessed via https://efiling.energy.ca.gov/GetDocument.aspx?tn=229800&DocumentContentId=61244.

outside of each community that could have cumulative climate change impacts. Even a lesser level of this activity would likely create CEQA impacts that must be discussed and analyzed.

Unfortunately, CARB has not demonstrated how the Project will impact existing electricity demand. The draft EA does not analyze (or even acknowledge) how development of foreseeable additional renewable generating resources will impact the environment. Because it is likely that CARB can determine with particularity the amount of MW or MWh that will be needed to fully implement the Project in years to come, an accompanying analysis of generating resources and their potential environmental impacts must be provided to comply with CEQA's requirements. These renewable resource facilities are known to have environmental impacts in their own right, including but not limited to, impacts on federal and California sensitive species, water quality and quantity, nearby noise receptors, and project-related air quality impacts.

As more electric energy is utilized throughout California, new energy transmission capacity must be fabricated, transported to, and installed throughout the state to connect with thousands of miles of new nationwide transmission lines. Additional transmission facilities will have significant impacts to the physical environment and result in aesthetic and potentially cultural impacts. The fabrication, transportation, and construction of new transmission equipment and capacity will also generate GHG emissions which would have cumulative climate change impacts.

In addition, California communities and businesses will be required to install onsite charging, hydrogen fueling, and power storage infrastructure in order to comply with CARB mandates, as described in the 2022 SIP. For heavy-duty vehicles, at least, CARB collected detailed facility data through its Advanced Clean Trucks (ACT) Large Entity Reporting requirements, and has address-specific information about where facilities are located and where infrastructure will be needed. As the draft SIP notes, the volume of these projects is not insignificant; between the ACT rule and the proposed Advanced Clean Fleets rule, CARB expects 651,000 heavy-duty ZEVs will be deployed by 2037, all requiring extensive infrastructure to support load demand, charging, power storage, and hydrogen fueling. The fabrication, transportation, and installation of materials and equipment from these projects would have significant hazardous materials, human health, fire, fire suppression and policing services, GHG emissions, and physical impacts. For example, the energy intensity of battery core raw material mining, transportation, and fabrication alone could be expected to result in cumulatively significant climate change impacts.

CEQA caselaw holds that EIRs must consider the effects of changes to the environment that can result from an expansion of facilities, services, or utilities to serve the project. *Goleta Union Sch. Dist. v. Regents of Univ. of Cal*. (1995) 37 Cal.App.4th 1025; *El Dorado Union High Sch. Dist. v. City of Placerville* (1983) 144 Cal.App.3d 123. CCEEB believes that approach taken in the draft EA is inadequate, and that CARB does have data it can use to improve analysis of impacts stemming from its electrification policies.

Zero-Emission Vehicles and Equipment During Electrical Emergencies

Also not addressed in the draft EA are questions about what happens to zero-emission vehicles and equipment during electrical power emergencies. This problem has two main aspects to consider in terms of environmental effects: facilities that have backup power, and facilities that don't. For the former, a few facilities and homeowners may choose to install newly emerging zero-emission options, like onsite battery storage or fuel cells, but most likely will opt for traditional diesel-fueled emergency generators, especially in early years when the incremental cost of zero-emission options will be prohibitive. For example, a study of the recent increase in permitted emergency generators found that 90 percent were diesel fueled.[9] CARB has made no attempt to discuss or quantify the air pollution impacts from this likely outcome, nor has the need for backup power been materially addressed in any of its zero-emission rulemakings or public meetings.

For facilities that do not have onsite backup power, other environmental and public safety effects could occur. For example, all-electric buildings and homes could face risks from a loss of heating, cooling, and refrigeration during emergency events or power shutoffs, and manufacturing and industrial operations could face workplace hazards due to a sudden or persistent loss of power. CCEEB has raised the need for contingency planning in the past to CARB staff, and reiterates its request here, even if it happens outside the scope of the draft EA.

Examples of Questionable Assumptions or Lack of Data

Air Quality Emissions Inventory Based on Outdated 2012 Data

CCEEB was surprised that the air quality section of the draft EA offered no quantification of either emission reduction benefits or increases due to compliance actions stemming from the proposed SIP measures. Moreover, the inventory used to establish the environmental setting in the draft EA is based on 2012 data and simply repeats (verbatim) what was used in CARB's 2016 SIP. CCEEB is concerned by this failure to quantify air impacts, particularly for the measures that shift emissions from the tailpipe to the power generation sector. For example, some experts estimate that electrifying heavy-duty vehicles in California could increase peak demand by as much as 11 gigawatts, based on California Energy Commission forecasts of charging infrastructure needed. This level of load represents about twenty percent of California's historical peak demand. Rather than assess how load growth could affect air quality over time (or how communities in proximity to power generation or renewable energy facilities could be impacted by near-source pollution), the draft EA simply recites the SB 100 goal to have 100 percent renewable energy by 2045, and says that the purpose of the SIP in any case is to reduce *mobile* sources of emissions.

[9] See https://www.businesswire.com/news/home/20211006005088/en/New-Study-Shows-a-Rapid-Increase-of-Diesel-Fueled-Backup-Generators-Across-California.

CCEEB is unclear why CARB ceased production of its Air Almanac, as it was a useful document that showed 20-years of air quality trends for all five criteria pollutants, as well as ten high priority toxic air contaminants. CCEEB believes it should be updated, especially if CARB intends to use it for SIP purposes. Additionally, CCEEB believes that the Air Almanac was meant to serve the purpose of meeting CARB's statutory requirements to develop a statewide emissions inventory for mobile and area sources, and to compile this data along with air toxics data reported quadrennially by stationary sources to the air districts.[10] Indeed, it was this same section of code that staff used to justify some of its recently adopted changes to the AB 2588 Emissions Inventory Criteria and Guidelines.[11] CCEEB does not understand why CARB is collecting new data, ostensibly for the statewide inventory, but not actually publishing the inventory. That is, we do not understand why staff stopped implementing the statewide inventory program after the 2013 version of the Air Almanac, or why all previous iterations of the quadrennial inventory are no longer posted to the CARB website. We believe that this historical trend analysis provides value to the public, policy decision makers, and CARB partner agencies, and that it should be reinstituted.

Draft EA Assumes Infrastructure Projects Will Stay Within Existing Facility Footprint

Throughout the draft EA, CARB assumes that development of new or expanded facilities in response to the 2022 SIP measures would occur "in areas within existing footprints or in areas with consistent zoning." This core assumption applies to mining-related impacts, construction impacts, impacts to tribal cultural resources, wildfire impacts, expansion of public services like utility electricity distribution lines, manufacturing of ZEVs and zero-emission equipment, battery recycling and refurbishing, and other impacts. What is not addressed is the physical footprint of needed charging and hydrogen fueling infrastructure, which will be needed at publicly accessible facilities as well as in-depot/at-residence to support ZEVs. Impacts from building out this infrastructure will be significant and will affect the environment, yet have not been considered in the draft EA at all.[12]

Draft EA Assumes Total Heavy-Duty Vehicle Population Will Decrease Over Time

Although the draft EA does not present CARB assumptions about changes in the number of heavy-duty vehicles operating in California, data shared with the California Energy Commission for demand forecasting purposes seems to indicate that CARB staff assume the total population

[10] See Health & Safety Code Section 44345
[11] See the Staff Report: Initial Statement of Reason for the Amendments to the Emission Inventory Criteria and Guidelines Report for the Air Toxics "Hot Spots" Program, September 29, 2020, page 50: "In addition, the information on activity of mobile sources also supports the estimation of toxics from mobile and areawide sources that CARB is required to compile pursuant to Health and Safety Code Section 44345(b)."
[12] In contrast, the Port of Long Beach did a comprehensive public charging study for its drayage fleets, with detailed assessment of physical footprint requirements, costs, and electricity/grid demand, among other impacts. See https://www.businesswire.com/news/home/20211006005088/en/New-Study-Shows-a-Rapid-Increase-of-Diesel-Fueled-Backup-Generators-Across-California.

of vehicles will *decrease* as compared to the reference scenario (i.e., baseline conditions). That is, CARB assumes that ZEVs will ship more than their combustion counterparts; therefore, fewer vehicles will be needed for the same share of goods movement. CCEEB questions this assumption, especially given reduced payload capacities for battery electric vehicles. Moreover, assumptions about lower downtime for repairs and maintenance have not be substantiated by real-world studies, and in most applications, there are no or insufficient numbers of heavy-duty ZEVs deployed to provide any data. Indeed, lessons learned from early adopters and pilot projects indicate that more than one ZEV is needed to replace a single combustion-powered vehicle, suggesting that the total population of heavy-duty vehicles would need to increase over time to handle the same about of goods movement. More trucks could mean more particulate matter from road dust and tire wear, which has not be evaluated, as well as increased noise and congestion from roadways and vehicular transportation corridors.

A Multi-Technology Pathway Should Have Been Considered for the Alternatives Assessment

In October 18, 2021 comments to the Board on the Mobile Source Strategy, CCEEB asked that a multi-technology pathway be considered in the draft EA alternatives assessment for the 2022 SIP. CCEEB and others had previously raised the near-term benefits of a more nuanced, multi-technology approach to CARB, including work done by the Center for Environmental Research and Technology at the University of California, Riverside,[13] as well as comments to CARB from the South Coast Air Quality Management District about the need for near-term actions.[14] We are disappointed that no effort was made by CARB staff to incorporate any of these points or emissions analyses into the alternatives assessment. Again, we reflect back on statutory language of intent for CEQA review, and find the draft EA unfortunately lacking.

Conclusion

CCEEB appreciates the work that staff has done in developing the proposed 2022 SIP and its efforts to engage with stakeholders and agency partners like the SCAQMD and San Joaquin Valley Air Pollution Control District. CCEEB also recognizes CARB's need to conduct legally defensible CEQA impact assessments for its programs and rules, as well as the expertise of its legal counsel and air planners responsible for these tasks. Our comments on the draft EA are not meant as a criticism on CARB staff or its work. Instead, we have tried to use our comments as an opportunity to raise important questions about tradeoffs and unintended consequences that we believe should be discussed by the Board, senior staff, and stakeholders across the spectrum of interests. CEQA, which was originally intended as the mechanism for these types of

[13] See Arun S.K. Raju, Barry R. Wallerstein, Kent C. Johnson, "Achieving NOx and Greenhouse gas emissions goals in California's Heavy-Duty transportation sector," Transportation Research Part D: Transport and Environment, Volume 97, 2021, 102881, ISSN 1361-9209, https://doi.org/10.1016/j.trd.2021.102881 .
[14] See, for example, the May 14, 2021 SCAQMD letter to Executive Officer Corey on the Revised Draft 2020 Mobile Source Strategy. Accessed online via https://ww2.arb.ca.gov/sites/default/files/2021-05/6-SCAQMD_Comment_RevisedDraft2020MobileSourceStrategy.pdf#page=2.

considerations and policy debates, does not seem to be as useful for such purposes anymore, and the draft EA appears more perfunctory than thought provoking.

CCEEB will continue to look for ways to engage with CARB and all interested parties to have these discussions and find space to explore and (hopefully) solve implementation challenges. For example, we were encouraged by the recent series of infrastructure work group meetings held in support of the Advanced Clean Fleet rulemaking. While these meetings have only started the conversation about ZEV infrastructure, they reflect what we hope is a genuine desire at CARB to have substantive discussions and to look for innovative ways to explore complex issues with the public. For now, we recommend that CARB think seriously about reinstituting its Air Almanac and updating the statewide emissions inventory, and that CARB continue to facilitate multi-agency discussions on infrastructure and energy challenges that will come from implementation of the 2022 SIP.

If you have any questions or wish to discuss these concerns further, please contact CCEEB's Air Project Regulatory Manager, Jon Costantino with Tradesman Advisors at jon@tradesmanadvisors.com. Thank you.

Sincerely,

Bill Quinn
President
CCEEB

cc:
Mr. Jackson Gualco, The Gualco Group, Inc.
Members of the CCEEB Air Project