



August 1, 2025

California Air Resources Board  
1001 I Street  
Sacramento, CA 95814

Dear Chair Randolph and Members of the Air Resources Board:

As the Federal government continues to gut critical climate regulation and defund clean energy projects, the undersigned organizations urge the California Air Resources Board to recommend and adopt transformative clean vehicle policies that reduce tailpipe emissions through electrification, clean up the supply chain, while creating sustainable and long-lasting good union jobs.

While vehicle electrification is essential to reducing transportation-sector emissions, it is not enough to meet California's climate goals on its own. The full climate impact of electric vehicles (EVs) depends not just on how they operate, but also on how they're made. Without targeted policy intervention, auto manufacturers will continue to source emissions-intensive materials like coal-based steel and rely on outdated, opaque battery supply chains. Embodied emissions, the greenhouse gas emissions generated during the extraction, processing, and manufacturing of materials, can account for a substantial portion of an EV's total lifecycle emissions. In fact, steel production alone is responsible for [30% to 50%](#) of a vehicle's manufacturing-related emissions. If California fails to establish strong demand signals or procurement standards that prioritize low-carbon materials, clean steel and ethical battery sourcing will continue to play only a marginal role in vehicle manufacturing.

California is uniquely positioned to lead the way in decarbonizing vehicle materials, starting with steel. The state's steel sector already relies almost entirely on electric arc furnace technology, which uses recycled scrap instead of carbon-intensive virgin iron ore. When paired with California's [low-carbon electricity grid](#), this process yields steel with significantly lower embodied carbon intensity than conventionally produced alternatives. California is also emerging as a hub for next-generation clean steel production, with two major initiatives underway: Pacific Steel Group's [Mojave Micro Mill](#), which will be the first "zero process carbon emissions" melting and rolling facility in the state, and a [pilot project](#) involving U.S. Steel, Molten Industries, and CPFD Software that aims to develop near-zero emissions iron reduction. These innovations position

California to demonstrate scalable pathways for clean steel manufacturing, but policy support will be necessary to accelerate market adoption and direct demand toward in-state producers.

The state's growing EV battery industry presents a similar opportunity and challenge. Although California has made notable investments in [lithium extraction](#) and [battery innovation](#), it still lacks robust policy tools to ensure these developments align with climate, labor, and environmental justice priorities. Globally, [up to half of battery lifecycle emissions](#) stem from mineral processing, much of which occurs overseas under limited environmental oversight. At the same time, California's battery sector is rapidly expanding, with companies like [QuantumScape](#) and [Amprion Technologies](#) pioneering solid-state and silicon-anode technologies, respectively, and infrastructure like [Sparkz's new Sacramento plant](#) supporting domestic production of key materials.

To ensure that EVs deliver their full climate benefit, California must adopt policies that strengthen oversight, incentivize low-carbon sourcing, and direct public support to battery supply chains that are not only efficient but also sustainable and ethically aligned. Additionally, policies aimed at reducing emissions in the steel and battery supply chains open an opportunity to bring cutting-edge technology to California while creating good union jobs.

We believe that California has the ability to position itself as a global leader for the deployment of innovative technologies for decarbonized steel and battery supply chains.

**Given the necessity of policies that address not only vehicle tailpipe emissions, but also embodied emissions, we ask that CARB consider the following policy options:**

1. **Assess the Feasibility of Embodied Emissions Policy:** Sponsor a feasibility study to analyze the policy opportunities to incentivize cleaner production of batteries and primary steel and/or mandate the use of lower-carbon primary steel and batteries in vehicles and other infrastructure and transportation projects. As precedent, the CalEPA contracted with the University of California Institute of Transportation Studies and the University of California Santa Barbara to conduct two studies funded by the state of California:
  - a. The ITS demand-side study, "[Driving California's Transportation Emissions to Zero](#)," identifies strategies to significantly reduce transportation-related fossil fuel demand and emissions.
  - b. The UCSB supply-side study, "[Enhancing equity while eliminating emissions in California's supply of transportation fuels](#)," analyzed several tools to reduce in-state fossil fuel extraction in parallel with the demand reductions modeled in the ITS study.
2. **Subsidies:** Assess the feasibility of creating additional subsidies for vehicles with lower lifecycle emissions aligned with targeted goals for the steel and battery supply chains.
3. **Disclosure of Disaggregated Scope 3 Emissions:** Disclosure of Scope 3 emissions is key to understanding the embodied emissions of electric vehicles and assessing the efficacy of policy interventions. As an extension of [SB253](#), CARB should consider

requiring or incentivizing disaggregated emissions disclosure for targeted vehicle supply chains such as steel, aluminum, and batteries.

- 4. Promoting High-Road Labor Standards:** Further, To support momentum in the EV industry, threatened by the repeal of Federal EV Tax Credits, and empower Californians to purchase high quality EVs that are manufactured responsibly, the state of California should develop a consumer EV tax credit program that makes purchasing EVs for Californian families more accessible while rewarding manufacturers committed to curbing the impacts of climate change and creating high quality jobs across the supply chain of electric vehicles. To incentivize the creation of safe, high quality, green jobs with family sustaining wages throughout the auto manufacturing supply chain, manufacturers must obtain certification of eligibility for EV Tax Credits or rebates. In order to apply for eligibility for a vehicle model, a manufacturer must:
- a. Certify that their vehicles are not manufactured through the use of any forced labor or child labor.
  - b. For each vehicle seeking eligibility for the tax credit program, manufacturers should be required to disclose 1) the location of the domestic facility where manufacturing occurs, 2) the number of workers employed at the facility, and 3) the minimum wage/salary paid to each classification of manufacturing workers at the facility.
  - c. Certify that the following requirements are met as they pertain to the manufacture of vehicles seeking eligibility for the tax credits:
    - i. All workers employed by the manufacturer, suppliers, staffing firms, or other agents employing those performing work related to the manufacturing of the vehicles and their parts are paid compensation equal to that of comparable workers and no less than the applicable federal, state, or local minimum wage, whichever is greater.
    - ii. All workers employed by the manufacturer, suppliers, staffing firms, or other agents employing those performing work related to the manufacturing of the vehicles and their parts shall be placed in the proper employment classification as either employees or independent contractors.
    - iii. The manufacturer, suppliers, staffing firms, or other agents employing those performing work related to the manufacturing of the vehicles and their parts are prohibited from using misleading or fraudulent practices during recruitment of employees including making misrepresentations regarding their wages and fringe benefits, job duties, work locations, living conditions in employer provided housing, costs charged to employees, and hazardous nature of the work.
    - iv. The manufacturer, suppliers, staffing firms, or other agents employing those performing work related to the manufacturing of the vehicles and their parts shall comply with all applicable safety and health requirements and shall comply with sections 6310 and 6311 of the California Labor Code, pertaining to protection of employees who file complaints or refuse to work in the face of hazardous conditions.

California has long led the nation in climate policy and clean transportation innovation. By adopting forward-looking policies that reduce embodied emissions in vehicles, the state can extend its leadership to the upstream supply chain, accelerating decarbonization, supporting domestic manufacturing, and delivering real economic and environmental benefits to California communities.

These actions are not only necessary to meet the state's climate commitments, but they also represent a strategic opportunity to build a cleaner, more resilient, and more equitable transportation future. We urge CARB to move swiftly and decisively to consider these policies outlined above in its recommendations.

Sincerely,

Public Citizen  
Jobs to Move America  
Lead the Charge  
Afreewatch International  
Mighty Earth  
Industrious Labs