



April 7, 2023

Honorable Chair Randolph & Board Members  
California Air Resources Board  
1001 I Street  
Sacramento, CA 95814

**RE: SUPPORT for the Passage of a Strong Advanced Clean Fleets Rule**

Dear Chair Randolph and Members of the Board,

On behalf of the undersigned labor, public health, environmental, and frontline freight community groups – and collectively, our thousands of members across the State – we urge adoption of the proposed Advanced Clean Fleets (“ACF”) Rule.

**1. 100% ZE Sales by 2036 is a Vital Victory for Clean Air, Good Jobs, and Climate Action.**

Our coalition strongly supports the ACF rule’s 100% zero-emissions (ZE) medium- and heavy-duty vehicle (MHDV) sales requirement by 2036. Establishing a date for when all new sales must be zero-emission provides the necessary market certainty to speed up the transition to ZE MHDVs, stimulating investments in vehicle manufacturing, charging infrastructure buildout, and ZE technology supply chains while promoting advanced planning by all stakeholders including fleets, manufacturers, and utilities. Advancing the 100% date to 2036 results in an increase of more than 130,000 Class 2b to 8 ZEVs in 2050.<sup>1</sup> It also appropriately accounts for the rapid ZE vehicle technological advancements, global competitive pressures, and private sector commitments to ZE purchases and sales, and will enable California to maximize federal ZE MHDV funding opportunities. Moreover, it builds on California’s leadership for 100% ZE passenger vehicle sales just one year earlier. Together, with other elements of the rule, including 100% zero-emission drayage on California roads by 2035, and purchase requirements for public fleets beginning in 2024, the rule will deliver profound benefits for California and beyond. These include:

● **Public Health**

The ACF proposal will save over 2,500 lives.<sup>2</sup> In addition to the avoided emergency room visits and hospitalizations for cardiovascular and respiratory illness, these health benefits are valued at an estimated \$26.5 billion. Trucks are also the largest form of lung-searing, smog-forming NOx pollution in California, giving their electrification outsized pollution reduction and accompanying health benefits. Even in its earlier form, the rule was expected to achieve 19.3 tons per day of NOx reductions by 2037.<sup>3</sup> We estimate the strengthened proposal gives us another nearly 10 tons per day – reductions the State desperately needs.

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<sup>1</sup> ERM, California Clean Trucks Program (August 30, 2022), at 4

<https://www.ucsusa.org/sites/default/files/2022-08/ca-clean-trucks-report.pdf>.

<sup>2</sup> CARB, Appendix B – Updated Costs and Benefits Analysis (Mar. 27, 2023), at 7

<https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2022/acf22/acf15db.pdf>.

<sup>3</sup> CARB, State Strategy for the State Implementation Plan (Sept. 22, 2022), at 38

[https://ww2.arb.ca.gov/sites/default/files/2022-08/2022\\_State\\_SIP\\_Strategy.pdf](https://ww2.arb.ca.gov/sites/default/files/2022-08/2022_State_SIP_Strategy.pdf).

- **Environmental Justice**

The facilities and corridors where trucks operate cluster most heavily in communities of color and low-income communities that are already facing unbearable pollution and socio-economic burdens. As the Staff Report recognizes, “exposure to diesel PM is a main contributor to these metrics for many communities ranked in the top 10<sup>th</sup> percentile statewide. Under AB 617, all community steering committees for communities selected to date have identified air pollution from heavy-duty diesel vehicles as a concern in their communities.”<sup>4</sup> This rule’s strong focus on drayage trucks operating between ports, railyards, and warehouses is a serious step to addressing the unjust harm in freight-impacted communities.

- **Climate Action**

The IPCC’s most recent warning is unequivocal – the time remaining to avert irrevocable damage to our planet is vanishing.<sup>5</sup> With two decades to eliminate emissions, and less than one decade to cut them in half, climate action must be a sprint. By beginning strong purchase requirements in 2024, and moving the phase-out of new combustion truck sales from 2040 to 2036, CARB is responding to the call to accelerate our efforts. By 2045, the strengthened ACF nets nearly 25 MMT per year in annual, direct greenhouse gas reductions.<sup>6</sup> This proves we are ready to outpace projections from our own Scoping Plan and gives us a fighting chance of achieving carbon neutrality by 2045.<sup>7</sup>

- **Economy**

The proposed regulation is an unquestionable boost for California’s economy. Assuming all costs are borne by fleets, the operational advantages of ZE trucks lead to \$48 billion in net savings *not including health or environmental benefits*.<sup>8</sup> In other words, the rule could be justified purely on economic grounds, because it results in savings that can be passed on from fleets to businesses and consumers. With an explosion of investment in electrified transportation manufacturing and supply chains,<sup>9</sup> world-leading ZE regulations send an unambiguous message to clean industries that California is the economy of the future.

- **Worker Justice**

The ACF demonstrates CARB’s commitment to a holistic approach to addressing labor exploitation and driver misclassification in its environmental regulations. The trucking industry is notorious for misclassifying drivers as independent contractors even while the businesses retain functional control over their operations. The rule’s definition of “controlling companies” ensures firms, and not drivers, are accountable for the financial responsibility of transitioning. This is a partial but necessary step towards

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<sup>4</sup> CARB, ACF Regulation Staff Report: Initial Statement of Reasons (Aug. 30, 2022), at 107 <https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2022/acf22/isor2.pdf>.

<sup>5</sup> Fiona Harvey, “Scientists Deliver ‘Final Warning’ On Climate Crisis: Act Now or It’s Too Late” (Mar. 20, 2023)

<https://www.theguardian.com/environment/2023/mar/20/ipcc-climate-crisis-report-delivers-final-warning-on-15c>.

<sup>6</sup> CARB, Appendix B – Updated Costs and Benefits Analysis (Mar. 27, 2023), at 5 <https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2022/acf22/acf15db.pdf>.

<sup>7</sup> CARB’s Scoping Plan assumed 100% sales of ZE trucks would be achieved by 2040. CARB, 2022 Scoping Plan (Dec. 2022) <https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp.pdf> at 73.

<sup>8</sup> CARB, Appendix B – Updated Costs and Benefits Analysis (Mar. 27, 2023), at 11 <https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2022/acf22/acf15db.pdf>.

<sup>9</sup> See, e.g., Charged, Dashboard: The U.S. & Canada Electric Vehicle Supply Chain (Accessed Mar. 31, 2023) <https://www.charged-the-book.com/na-ev-supply-chain-map>.

worker justice, and we hope to work with CARB to ensure fleets of all sizes are deterred from exploiting their drivers.

- **Job Creation**

As the global transition to ZEVs accelerates, the ACF will ensure California maintains its lead in both ZEV manufacturing and high road, high wage construction careers building out electric supply infrastructure.<sup>10</sup> Manufacturers have announced 143,000 new jobs in the EV sector in the past 8 years, 32% of which were announced in just the last 6 months.<sup>11</sup> Jobs building and maintaining electric charging infrastructure are a critical opportunity for California's electricians to upgrade their training with certifications like the Electric Vehicle Infrastructure Training Program (EVITP) that build upon foundational skills, achieve quality wages and family-supporting benefits, and cannot be shifted out of state. There are approximately 3,000 EVITP certified electricians in California with hundreds more being certified annually.

- **California's Global Leadership**

No other jurisdiction in the world has committed to 100% zero-emission truck sales by 2036. California, as the fourth largest global economy, is proving that it is prepared to take bold, decisive action to rein in one of its most-polluting sectors, erode one of the largest sources of fossil fuel demand, and transition to an economy that delivers good jobs, clean air, and climate action. As the EPA and the EU both consider setting their own truck standards, it sets a new stake in the ground: action cannot wait until mid-century. California is pioneering the caliber of action that ensures it can continue to be a model for success in jurisdictions and nations across the globe.

## **2. Rapid Progress Means CARB Should Confidently Adopt a Strong ACF Rule.**

Some industry groups argue California should slow down so that new regulations only proceed once market conditions effectively make them redundant. Our view is the opposite: CARB's record proves that robust regulations catalyze action and advance technology deployment. Indeed, thanks in part to past leadership by CARB and its peer agencies, and the relentless advocacy of communities fighting for the basic right to clean air, the technological and economic potential for rapid truck electrification has never been greater.

- **Electric trucks save owners money.**

Even without incentives, and even faster than electric cars, nearly every independent analysis concurs that electric trucks lead to significant savings. CARB's own total cost of ownership analysis finds ZEVs have minimal cash flow impact in the early years and, by 2030, can pay themselves off within as little as 2 years.<sup>12</sup> The United States Department of Energy's recent study found that ZE trucks reach total cost of

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<sup>10</sup> EV Hub, Where are the EV jobs?, (2022) <https://www.atlasevhub.com/weekly-digest/where-are-the-ev-jobs/#:~:text=The%20Southeast%20is%20a%20major,extent%2C%20the%20Midwest%20and%20Texas.>

<sup>11</sup> EDF, U.S. Electric Vehicle Manufacturing Investments and Jobs (Mar. 2023) <https://www.edf.org/media/report-finds-investments-us-electric-vehicle-manufacturing-reach-120-billion-create-143000.>

<sup>12</sup> CARB, Draft ACF Total Cost of Ownership Analysis (Sept. 2021) at 8 [https://ww2.arb.ca.gov/sites/default/files/2021-08/210909costdoc\\_ADA.pdf](https://ww2.arb.ca.gov/sites/default/files/2021-08/210909costdoc_ADA.pdf).

parity with diesel by 2035 for *all* medium- and heavy-duty vehicle classes.<sup>13</sup> A related report factoring in the recent incentives from the Inflation Reduction Act found that if economics drive adoption, medium- and heavy-duty ZEVs could reach 39%–48% ZEV sales share by 2030 and 44%–52% by 2032.<sup>14</sup>

- **The Inflation Reduction Act makes those savings even greater and more immediate.**

The IRA includes a long list of provisions that collectively create an enormous accelerant for the economic advantage of electric trucks. Updated analysis of the commercial vehicle tax credit alone shows that *upfront price parity* is reached for many ZE trucks as early as this year, and across every truck category by 2031.<sup>15</sup> Beyond the tax credit, the IRA includes other significant tailwinds for medium- and heavy-duty ZE purchases, charging infrastructure, advanced domestic manufacturing, and deployment.<sup>16</sup> The IRA includes another \$3 billion for pollution reduction at Ports, and \$1 billion in grants and rebates to help purchase zero-emissions class 6 and 7 vehicles. Additionally, the Bipartisan Infrastructure Law includes \$4.75 billion in funding for medium- and heavy-duty vehicles and infrastructure.

- **A widening share of trucks on the road can go electric today.**

A few years ago, the prevailing view was that electric trucks could provide a niche solution for school buses or delivery vans that returned to base for overnight charging. However, this perspective is built on an outdated view of capable range and expected charging options. A 2021 analysis found that two-thirds of the in-use truck fleet indicate “strong potential for near-term [pre-2025] uptake.”<sup>17</sup> In 2022, electric trucks were put to the test in on-road demonstrations, and using telematics of their duty cycles and operations, led industry experts to determine that 65% of medium-duty and 49% of heavy-duty trucks are electrifiable today.<sup>18</sup>

- **Private stakeholders and public agencies are ramping up infrastructure deployment.**

The California Energy Commission (CEC) has unleashed a suite of programs and funding streams focused squarely on medium- and heavy-duty charging in California. In December, CEC approved a record \$2.9 billion investment for zero-emission infrastructure, \$1.7 billion of which is specifically for

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<sup>13</sup> NREL, Decarbonizing Medium- & Heavy-Duty On-Road Vehicles: Zero-Emission Vehicles Cost Analysis (Mar. 2022) at 2 <https://www.nrel.gov/docs/fy22osti/82081.pdf>.

<sup>14</sup> Peter Slowik *et al.*, Analyzing the Impact of the Inflation Reduction Act on Electric Vehicle Uptake in the United States (Jan. 2023) <https://theicct.org/wp-content/uploads/2023/01/ira-impact-evs-us-jan23.pdf>.

<sup>15</sup> Ellen Robo *et al.*, Inflation Reduction Act Supplemental Assessment: Analysis of Alternative Medium- and Heavy-Duty Zero-Emission Vehicle Business-As-Usual Scenarios (Aug. 19, 2022) at 4 <https://www.erm.com/contentassets/154d08e0d0674752925cd82c66b3e2b1/edf-zev-baseline-technical-memo-addendum.pdf>.

<sup>16</sup> Jeff St. John, “Buckle Up: Climate Law to Turbocharge Sales of Electric Trucks and Buses” (Aug. 17, 2022) <https://www.canarymedia.com/articles/electric-vehicles/buckle-up-climate-law-to-turbocharge-sales-of-electric-trucks-and-buses>.

<sup>17</sup> J. Culkun *et al.*, Medium- & Heavy-Duty Vehicles: Market Structure, Environmental Impact, and EV Readiness (Aug. 11, 2021) <https://www.mjbradley.com/reports/medium-heavy-duty-vehicles-market-structure-environmental-impact-and-ev-readiness>.

<sup>18</sup> Jessie Lund *et al.*, Charting the Course for Early Truck Electrification (2022) <https://rmi.org/insight/electrify-trucking/>.



medium- and heavy-duty trucks.<sup>19</sup> New services like the EnergiIZE program facilitate fleets' electrification plans, including a "Jump Start" component focused on personalized assistance for planning and grant applications for small fleets and independent owner-operators. The CPUC has directed utilities not only to deploy \$1.44 billion through 2030 in make-ready for medium-and heavy-duty (some of which is already operational)<sup>20</sup> but also approved rules that require charging station energization within an average of 125 days for a significant portion of chargers. Meanwhile, private investment is crowding into the space as OEMs, utilities, and truck stop operators are all partnering on national charging networks for medium- and heavy-duty vehicles.

- **New business models are emerging to simplify fleets' transitions.**

Charging, transportation, and electrification-as-a-service models mitigate upfront capital cost concerns and enable project deployments at scale.<sup>21</sup> Start-ups such as WattEV, TerraWatt Infrastructure, and Forum Mobility have already made significant investments in major charging networks to provide truck-as-a-service or charging-as-a-service business models that eliminate the need for upfront capital for trucks and/or chargers on the part of fleets.<sup>22</sup>

- **Communities and cost-conscious fleets are propelling demand for a faster transition.**

Since 2019, the number of zero-emission truck models commercially available has ballooned 625% to over 145 models across 30 manufacturers.<sup>23</sup> Already, New Jersey, New York, Massachusetts, Vermont, Oregon, and Washington have adopted California's Advanced Clean Truck Rule.<sup>24</sup> Over 250 fleets

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<sup>19</sup> CEC, CEC Approves \$2.9 Billion Investment for Zero-Emission Transportation Infrastructure (Dec. 2022)

<https://www.energy.ca.gov/news/2022-12/cec-approves-29-billion-investment-zero-emission-transportation-infrastructure>.

<sup>20</sup> CPUC, CPUC Adopts Transportation Electrification Program to Help Accelerate Electric Vehicle Adoption (Nov. 17, 2022),

<https://www.cpuc.ca.gov/news-and-updates/all-news/cpuc-adopts-transportation-electrification-program-to-help-accelerate-electric-vehicle-adoption>.

<sup>21</sup> EDF, "Why 2023 Is The Year for Companies to Join the Electric Truck Transition" (Jan. 26, 2023)

<https://business.edf.org/insights/why-2023-is-the-year-for-companies-to-join-the-electric-truck-transition/>.

<sup>22</sup> See, e.g., Jeff St. John, "This California Startup Wants to Be the Pony Express of Electric Trucks" (Feb. 10, 2022)

<https://www.canarymedia.com/articles/electric-vehicles/this-california-startup-wants-to-be-the-pony-express-of-electric-trucking>; and Todd Woody, "Heavy-Duty Electric Truck 'Subscriptions' Could Clean Up Polluting Ports" (Jan. 17, 2023)

<https://www.bloomberg.com/news/features/2023-01-17/electric-truck-subscription-could-quickly-cleanup-polluting-ports>.

<sup>23</sup> CALSTART, Zeroing in on Zero-Emission Trucks (Jan. 2022) at 8 [https://calstart.org/wp-content/uploads/2022/02/ZIO-ZETs-Report\\_Updated-Final-II.pdf](https://calstart.org/wp-content/uploads/2022/02/ZIO-ZETs-Report_Updated-Final-II.pdf).

<sup>24</sup> Sierra Club, "Vermont Adopts Rules for Cleaner Cars and Trucks" (Dec. 1, 2022)

<https://www.sierraclub.org/vermont/vermont-adopts-rules-cleaner-cars-and-trucks>.

across the United States either already operate or have deployment plans for electric trucks, and several companies have committed to electrifying their fleets on more aggressive timeframes.<sup>25</sup>

- **Momentum from public and private investments means the rate of technological progress will only increase.**

The pace of technological and market advancement in the past 5 years alone has been breathtaking, but it is certain to accelerate. Bloomberg New Energy Finance found spending on electrified transport is “rocketing skywards” – up 54% just compared to 2021 and essentially on par with global investment in renewable energy.<sup>26</sup> At the same time that costs continue to decline and deployment ticks up, we are unlocking new synergies and innovations to solve previous roadblocks. There is enormous innovation in sodium-ion and solid-state battery chemistries that can increase range and reduce charging time. There are new advances in charging management software and circuit hardware, as well as lower-cost distributed battery and energy solutions that all defray the need for costly grid upgrades. We are on the cusp of a revolution in technological advancement in electrification, and CARB’s ACF rule is a crucial signal directing industry toward the breakthroughs we need to meet the health and climate crisis.

### **3. The ACF Rule is a Necessary but Partial Step to Achieving Our Goals.**

For the reasons above, we are confident that even greater progress can be achieved in the coming years. And it must. Even with this rule in hand, significant additional action will be required to meet Governor Executive Order N-79-20, which mandates all medium- and heavy-duty fleets be zero-emissions by 2045 where feasible, and CARB’s own commitments under the Mobile Source Strategy and State Implementation Plan. The final proposal does not include any requirements for the vast majority of fleets in California – a gap that will leave about tens of thousands of highly polluting Class 7-8 trucks excluded from this regulation. As a result, frontline freight communities will continue to be exposed to unacceptable levels of diesel pollution, and drivers will continue to be exposed to unacceptable labor misclassification.

CARB will need a plan, within and beyond the proposed Zero Emission Truck Measure, to accelerate the near-term transition of highly polluting tractors and protect more tractor drivers. Additionally, it is evident that CARB will need to quickly bring forward new manufacturer requirements to align manufacturer’s sales obligations with the new target of 100% zero-emission sales by 2036. Action on these new measures should begin as quickly as possible and be finalized no later than 2026.

Also, truck route communities still experience many negative impacts not addressed by transition to ZEVs including brake and tire wear pollution, noise and vibrations, and safety concerns. CARB must also address these larger concerns in communities along truck freight routes to ensure that new and existing freight routes and associated facilities are taking into account sensitive receptors and all freight impacts to neighboring communities.

Furthermore, the proposed regulation allows State and Local Agency Fleets and High Priority and Federal Fleets to meet the ACF requirements with either ZEVs or near-zero emission vehicles (NZEVs). NZEVs still pollute truck routes and environmental justice communities, and should not be considered equal to

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<sup>25</sup> Samuel Beckett, “What You Need to Know About the Unstoppable Rise of Electric Trucks” (Nov. 2022)

<https://www.edf.org/blog/2022/11/15/what-you-need-know-about-unstoppable-rise-electric-truck-fleets>.

<sup>26</sup> Bloomberg New Energy Finance, Electrified Transport Spending Soars, Transition Rolls On (Feb. 2023) <https://about.bnef.com/blog/electrified-transport-spending-soars-transition-rolls-on/#:~:text=Now%2C%20in%20a%20shifting%20global,up%2054%25%20compared%20to%202021>.

ZEVs or used to comply with the ACF when ZEVs are available. Although MHD NZEV availability is limited today, several models are in development that would meet the rule's very low all-electric range requirements of between 15 and 35 miles. This, in addition to the rule not requiring NZEVs to operate under zero-emissions when possible, could incentivize the development of NZEVs over ZEVs in the near-term.

Nevertheless, the immediate passage of the current proposal is the surest path of progress toward realizing significant benefits to human health, climate action, and economic and environmental justice. We are thrilled to support CARB in its swift passage, and to continue to collaborate on all the work ahead.

Sincerely,

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