November 15, 2023

Environmental Improvement Board Administrator
New Mexico Environment Department
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IN RE: EIB 23-56 (R)- In the Matter of Proposed Amendments to 20.2.91 NMAC – New Motor Vehicle Emission Standards.

Introduction

Thank you for the opportunity to comment on the New Mexico Environmental Improvement Board's (EIB) proposed adoption of the Advanced Clean Cars II, Advanced Clean Trucks, and Heavy-Duty Engine and Vehicle Omnibus (ACCII/ACT/Omnibus) programs.

The American Petroleum Institute (API) represents all segments of America's natural gas and oil industry, which supports more than 11 million U.S. jobs. Our nearly 600 members produce, process, and distribute the majority of the nation's energy. API and its members commit to delivering solutions that improve air quality and the goal of reduced emissions across the broader economy. We support global action that drives emissions reductions and economic development. With respect to greenhouse gas (GHG) emissions, a federal policy with an economy-wide carbon pricing mechanism is the most efficient and transparent framework to address these emissions at both the national and state levels. Absent a federal economy-wide policy, a federal technology-neutral framework of carbon intensity-based fuel requirements linked to new vehicle standards on a well-to-wheels basis is a meaningful solution that provides a targeted systems-focused approach to achieving significant emissions reductions from the transportation sector both nationwide and for New Mexico.

As EIB goes through the process of soliciting and considering public input and feedback, API respectfully requests that EIB consider the following comments.

Reliable and Affordable Energy is Needed

API's members are applying their abilities and resources to develop emission reduction policies in the transportation sector in a manner that allows consumers in New Mexico, and throughout the U.S., the ability to choose the technology that best meets their needs. As the trade association representing the natural gas and oil industry, API is uniquely positioned to think about energy solutions, safety, and innovation for the next generation. API welcomes discussion on viable solutions to the dual challenge of ensuring reliable and affordable energy supplies to support economic growth and human prosperity, while advancing environmental progress.

All Technologies Should Compete to Reduce Transportation GHG Emissions

The free market has a proven track record of demonstrating that competition can achieve policy objectives and effectuate advanced technology at a reduced cost to the consumer. New Mexico should support policies that allow all technologies to compete, including efficient gasoline and diesel vehicles operating with conventional and lower carbon intensity fuels, battery electric vehicles, hybrid electric vehicles, hydrogen fuel cell vehicles, and hydrogen internal combustion engine vehicles. Technology-neutral policies create the most efficient and effective opportunities to reduce greenhouse gas (GHG) emissions in the transportation sector for new vehicles as well as in the existing vehicle fleet.

API members have made and continue to make significant investments in new technologies that reduce carbon emissions in transportation, including: stand-alone production and coprocessing of bio-feedstocks to make renewable fuels and renewable fuel blends; manufacturing of low-carbon ethanol; manufacturing of renewable natural gas from wastewater, landfill gas, and biodigesters at farms as fuel for compressed natural gas vehicles; production of blue and green hydrogen for transportation and stationary applications including building infrastructure; direct air carbon capture; carbon capture and sequestration of CO_2; development of advanced plastics to meet auto industry standards and consumer expectations while mitigating environmental impact through emissions reduction and improved vehicle efficiency by light-weighting; and installation of electric vehicle charging stations.

A Lifecycle Assessment is Necessary to Understand the Best Options for Reducing Carbon Emissions

Any rule should be based on a full lifecycle analysis that considers that all vehicles have emissions across their life cycle from production, utilization, infrastructure, and disposal. Using this analytical methodology will provide the best opportunity to decarbonize the transportation sector. Simply analyzing tailpipe emissions is not a scientifically sound approach to assessing vehicle emissions. According to one study, "advanced internal combustion engine vehicles (ICEVs) and hybrid electric vehicles (HEVs) can produce comparable reductions in GHG emissions as similarly equipped, full battery electric vehicles."[1]

In order to provide comprehensive evaluation of GHG impacts, EIB should undertake an analysis of the complete lifecycle emissions of passenger vehicles from mine-to-wheel and well-to-wheel, to end of life of battery electric vehicles and internal combustion engine vehicles, respectively.

New Mexico has Unique Truck Needs

The fleet of medium- and heavy-duty vehicles operating on U.S. highways is extremely diverse. It has evolved and diversified over decades to meet a wide range of engineering, operating, and durability specifications tailored to the often-unique needs and requirements of many different end-use applications. For example, some vehicles are designed for short urban daily package delivery trips in fleet operations, others are used in inland port freight drayage operations, while still others are engaged in utility maintenance operations, building and highway construction, urban and intercity passenger transit and freight hauling, to name just a few end-use vocational applications.

[1] ConservAmerica, "*Slow Down: The Case for Technology Neutral Transportation Policy*," p. 1, December 2020.

While some companies have announced plans to incorporate electric and zero emission vehicles (ZEV) into their operations, these technologies cannot currently meet the needs of all the end-uses for medium- and heavy-duty fleets. For instance, some cities are testing the use of battery electric buses (BEB) to determine if they can meet their needs depending on the terrain, weather, mileage of the route and the time available to charge. Some have found issues while others have been successfully deployed.

Municipalities are different and find that a combination of diesel and natural gas buses serve their municipal requirements while contributing to their GHG and other environmental goals. A study shows that there are 17 applications that account for 91 percent of the U.S. Medium- and Heavy- Duty Vehicle (MHDV) market and 94 percent of national MHDV emissions.[2] The proposed ZEV-centric regulatory approach would place significant limitations on MHDV fleets whose needs cannot be served currently by ZEV technology. Further, the proposed rule ignores fuel- and vehicle-based options (such as diesel technology vehicles meeting the U.S. Environmental Protection Agency's (EPA) latest near-zero emissions standards) that are currently available and can better accomplish EIB's objectives to expeditiously achieve greater transportation sector-related emission reductions from the entire vehicle fleet (both new and in-use) at lower cost.

Allowing Multiple Powertrains Creates More Opportunities to Reduce Emissions

API encourages EIB to allow private and public entities the freedom to determine the powertrain technology that best meets their individual operational needs and that best fits within the constraints imposed by the economic requirements and management philosophy of their individual organizations. Such an approach will optimize capital and result in sustained reductions in carbon emissions. In further support of these arguments, we incorporate by reference our comments to the California Air Resources Board (CARB) regarding its Advanced Clean Fleets proposal.[3]

Federal Approach and Value of Renewable Diesel, Biodiesel and Renewable Natural Gas

EPA has proposed a federal, nationwide HDV GHG rule[4] – and has already finalized a Low NOx program – both of which negate the need for EIB to adopt a California centric approach that might have unnecessary negative impacts to New Mexico. While our comments on that proposal express some concerns with the design of EPA's proposed program, API strongly believes that a federal program, rather than a patchwork of state-specific programs, is needed to achieve emissions reductions.

API supports a federal policy that improves and drives carbon dioxide and criteria pollutant emissions reductions from transportation. This approach includes liquid fuels which can provide improvements using feedstock and process technologies to reduce the carbon intensity of fuel and emissions. Lower-carbon intensity fuels such as renewable diesel, biodiesel, and renewable natural gas are being used today in existing clean-diesel and natural gas MHDVs to reduce emissions.

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[2] "The Easiest and Hardest Commercial Vehicles to Decarbonize," by Guidehouse Insights, for the Fuels Institute, April 2022.

[3] *See* API CARB Comments, Advanced Clean Fleets Regulation, submitted October 17, 2022, available at https://www.arb.ca.gov/lispub/comm/iframe_bccommlog.php?listname=acf2022&_ga=2.107523714.16078033.1676579910-776905670.1675872088.

[4] "Greenhouse Gas Emissions Standards for Heavy-Duty Vehicles—Phase 3," 88 FR 25926, April 27, 2023, available at https://www.govinfo.gov/content/pkg/FR-2023-04-27/pdf/2023-07955.pdf.

Cost to the Consumer of the Proposed Rule Not Fully Considered

The proposal indicates that the Clean Car Rule will not limit the types of vehicles New Mexicans can buy or force the purchase of an electric vehicle. However, the Clean Car Rule would require 82% of new car deliveries in 2032 by auto manufacturers be ZEVs. Thus, consumers who opt – or *need* – to buy a new vehicle will gradually have less ability and fewer choices to purchase an ICEV.

The social impact ascribes value to reducing NOx and PM2.5 emissions. We highlight a recent study that shows that these two vehicle emissions are incredibly low in today's ICEVs and when compared to an EV. They are nearly the same. Specifically, the Transportation Energy Institute study states with regards to NOx, "[c]omparing EPA NOx emission certification values for all 2019 vehicle models, GREET results indicate that both gasoline-fueled ICEVs' and EVs' NOx emissions will continue to decrease in the future, and all vehicle technology options' NOx reductions from a 1980 NOx level are within 1% of each other."[5]

Examining the results of the authors' investigation into PM, they state "with the transition to ultra-low sulfur gasoline and diesel enabling higher efficiency catalytic converters on gasoline vehicles and the introduction of selective catalytic reactors to control diesel NOx emissions, ICEVs have reduced criteria emissions 97-99%." The study also states that "[a]ccording to GREET well-to-wheel (WTW) emission values, today's gasoline and diesel vehicles' tailpipe PM emissions are 98.3% - 100.3% lower than the average 1980 gasoline car and 97.3-99.4% lower on a well-to-wheel basis."[6] In the case of both NOx and PM emissions, there is virtually no difference between EVs and ICEVs.

The EIB appears to rely solely on projections and analysis conducted by CARB for ACC II[7] to project BEV owner savings. However, this analysis was performed by CARB specific to vehicle owners in California – costs of the proposed rule to consumers in New Mexico were not adequately addressed. Further as shown below, according to a United States Department of Energy Argonne National Labs presentation, the levelized cost of driving (LCOD) on a dollar per mile basis for a midsize sedan for a conventional gasoline-fueled vehicle is only slightly less cost efficient when compared to a BEV with a 300-mile range (BEV 300).[8] Similar results are identified for a Small SUV in the "high tech future." A hybrid electric vehicle is shown to have an even lower LCOD than the conventional gasoline vehicle. This more cost-effective solution is limited by ACC II. The extracted charts below are provided for reference (note both charts include arrows and call-out boxes *added for emphasis*).

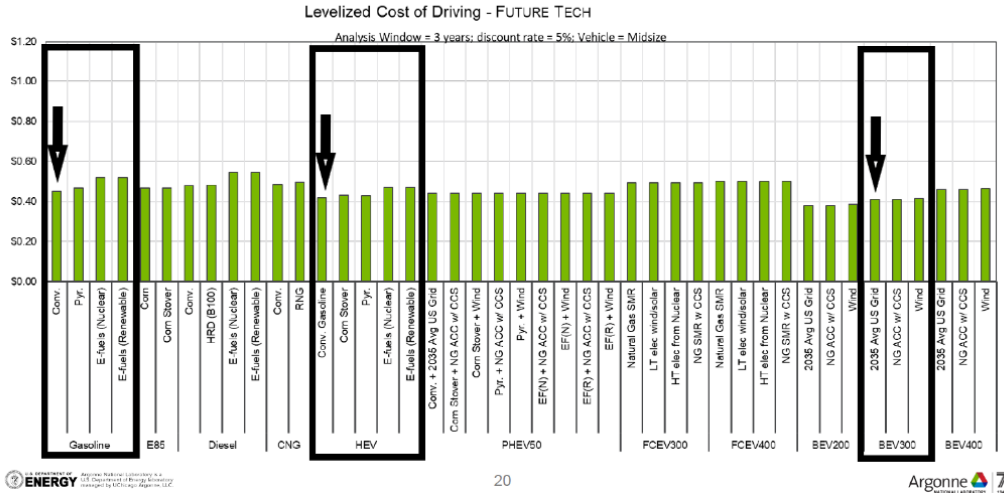
[5] "Decarbonizing Combustion Vehicles: A Portfolio Approach to GHG Reductions," Stillwater Assoc. for Transportation Energy Inst., July 2023, p. 69.

[6] *Ibid*, p. 64.

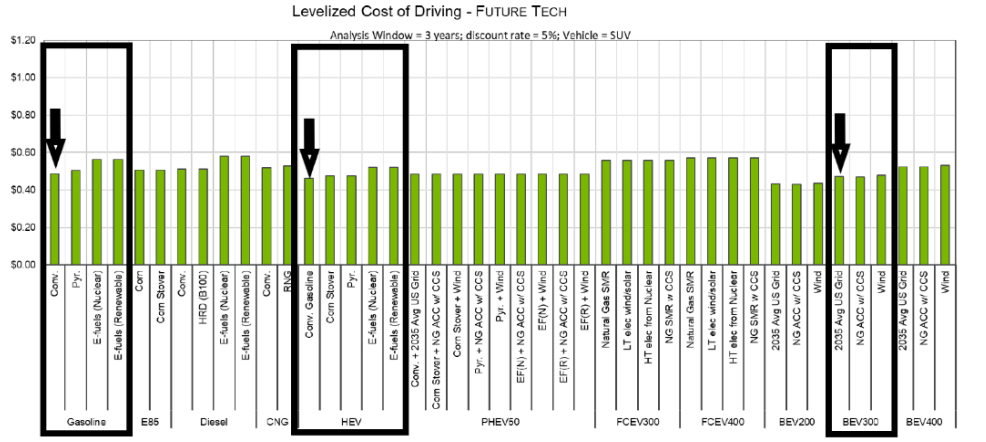
[7] New Mexico Environment Department "Clean Cars & Trucks Rules for New Mexico," October 16, 2023, https://www.env.nm.gov/wp-content/uploads/2023/10/2023-10-16-NMED-and-COA-CleanCarsAndTrucks-Presentation-Albuquerque.pdf.

[8] Amgad Elgowainy, Ph.D, *Levelized Cost of Driving*, October 2021 Presentation.

LCOD RESULTS FOR MIDSIZE SEDAN [$/mi] (HIGH TECH FUTURE) [MY2030]



LCOD RESULTS FOR SMALL SUV [$/mi] (HIGH TECH FUTURE) [MY2030]



Tax Implications and the Need for More Analysis

API respectfully suggests that EIB analyze the impact on tax revenue generated from changes to gasoline and diesel fuel consumption and switching to increased consumption of electricity. Liquid transportation fuels are taxed by both the federal and state governments to fund the construction and maintenance of bridges, roads, highways, and other transportation initiatives.

The federal tax on gasoline is 18.4 cents per gallon,[9] while New Mexico adds 18.8 cents per gallon in state tax as of 2023.[10] The federal tax on on-road diesel fuel is 24.4 cents per gallon and New Mexico adds 22.8 cents per gallon as of 2023.[11] In 2022, New Mexico distributed $33 million[12] in combined fuel tax distributions to municipalities and counties across New Mexico.

This amount would likely be eroded under EIB's proposal to adopt California's plan for clean cars and clean trucks, especially when considering the plan would require new vehicles that are not powered by liquid fuels. Given that there is no federal tax on electricity and tax funds generated from electricity are already allocated, EIB should consider the impacts of their proposal on tax revenues and the programs those revenues fund.

New Mexico is Unique from California

API respectfully suggests that New Mexico policymakers recognize that their state is fundamentally distinct from California geographically and economically. Adopting ACC II, ACT, and Omnibus programs in New Mexico that were developed by California regulators with California's singularly unique attributes is not the most prudent approach. In addition, California regulators have not done a critical analysis on alternative vehicle technologies beyond ZEVs that can reduce emissions now and even more into the future. Nor has a critical analysis of the uncertainties and ultimate feasibility of pushing forward an 82 percent ZEV requirement been completed. This lack of analysis could have significant impacts to consumers and businesses in New Mexico.

EIB should undertake additional economic analysis and undertake a detailed state-specific cost study that accounts for unique differences in New Mexico vs. California (geography, weather, non-attainment issues, etc.) that may impact the benefits or results from adopting California's Low NOx and ACT programs separately. Additionally, the economic analysis should include annual miles driven, costs associated with battery replacement, disposal and end-of-life, financing, recharging time, and the impact on truck utilization, as well as the necessary grid improvements, and the impact to New Mexico trucking companies and to road maintenance.

California is Changing its Regulations: New Mexico Should Pause

Given California will be amending provisions of its ACC II, ACT, and Omnibus programs, API recommends that it would be most prudent for EIB to suspend consideration of adopting California's programs and reevaluate following those amendments.

On July 6, 2023, the California Air Resources Board (CARB) and heavy-duty truck and engine manufacturers announced the Clean Truck Partnership, an agreement which offers flexibility to address both California's public health concerns and the needs of manufacturers that build the technology required for the transition to

[9] U.S. Energy Information Administration, "Petroleum Market Explanatory Notes," June 2023. https://www.eia.gov/petroleum/marketing/monthly/pdf/enote.pdf.

[10] U.S. Energy Information Administration, FAQS, "How much tax do we pay on a gallon of gasoline and on a gallon of diesel fuel?" https://www.eia.gov/tools/faqs/faq.php?id=10&t=5.

[11] Ibid.

[12] New Mexico Taxation & Revenue, "Combined Fuel Tax Distribution Reports (CFT)," https://www.tax.newmexico.gov/all-nm-taxes/combined-fuel-tax-distribution-reports-cft/.

zero-emissions.[13] This partnership stemmed from known challenges with the feasibility of California's programs that were not addressed until after the programs were finalized. As a part of the Partnership, CARB will be amending its Low NOx Omnibus and ACT programs. Amendments to the Omnibus regulations were proposed on August 1, 2023, and a public hearing was recently held on October 20, 2023.[14] Additionally, CARB has also announced workshops on forthcoming proposed amendments to both the ACT and ACC II regulations.[15]

Accordingly, it is recommended that EIB consider CARB's proposed Omnibus amendments rulemaking – and the expected amendments to the ACT and ACC II regulations – prior to its consideration of the adoption of all of these programs. EIB's proposed amendments to Title 20, Chapter 2, Part 91 of the New Mexico Administrative Code (20.2.91 NMAC) could incorporate obsolete provisions from the California Code of Regulations (CCR). Notably, the amendments at 20.2.91.102 NMAC specify CCR "As amended" date references of 11/30/2022, 3/15/2021, and 12/22/2021, when those provisions were approved by the California Office of Administrative Law. Further, 20.2.91.102 –NMAC-A states "Sections of the CCR and the CHSC incorporated by reference herein include the regulations as they existed on the effective date in 20.2.91.5 NMAC (Effective Date); incorporated sections of the CCR and the CHSC do not incorporate a later adoption or amendment of the regulation." Thus, adopting these provisions, and any others based on California's *current* regulations, could render the New Mexico regulations out of date if California amends those specific regulations in its current and upcoming rulemaking actions.

New Mexico Should Conduct Further Analysis

New Mexico should retain jurisdiction over its policies to address its air quality rather than incorporate by reference California standards. In essence, New Mexico would be ceding its authority to California; and, as noted above could create a situation where New Mexico's regulations could be in conflict with the California regulations upon or shortly after adoption given the fact that changes to California's programs are imminent. Further, by pursuing ZEV mandate programs like ACC II and ACT and ignoring other technologies as described above, New Mexico will be missing a significant opportunity to reduce GHG emissions from vehicles in the existing fleet and from those ICEVs that will continue to be sold in the future.

The proposal fails to provide a detailed analysis of EIB's evaluation of California's program and its consideration of all available facts. Rather, general statements are made that appear to assume positive impacts of the California program. However, what is best for California is not necessarily what is best for New Mexico.[16] Further, the proposal fails to show the significant impact that adoption of California's programs

[13] Clean Truck Partnership Agreement, July 6, 2023, https://ww2.arb.ca.gov/sites/default/files/2023-07/Final%20Agreement%20between%20CARB%20and%20EMA%202023_06_27.pdf.

[14] California Air Resources Board, "Heavy-Duty Engine and Vehicle Omnibus Regulation Amendments," https://ww2.arb.ca.gov/rulemaking/2023/hdomnibus2023?utm_medium=email&utm_source=govdelivery.

[15] November 13, 2023, "Workshop on Proposed Amendments to the Advanced Clean Trucks Regulation" (https://ww2.arb.ca.gov/act-meetings-workshops), and November 15, 2023, "Public Workshop on Amendments to the Advanced Clean Cars II Regulations" (https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/meetings-workshops).

[16] New Mexico's natural gas and oil supports more than 92,000 jobs, provides over $6 billion in wages and contributes more than $16.6 billion to the state's economy ("Impacts of the Oil and Natural Gas Industry on the U.S. Economy in

would have on individuals and small businesses who, when purchasing new vehicles, will have very limited options for buying ICEVs in New Mexico. Additionally, it does not appear that EIB has reflected on the impact of this action in relation to energy security considering that moving to battery electric vehicles (BEVs) will force the industry to rely on other countries such as China for critical materials to manufacture BEVs.

New Mexico also must consider challenges associated with the power sector and electric vehicle (EV) charging infrastructure. In a study commissioned by the Coordinating Research Council,[17] the authors report "as the EV market expands, access to home charging is likely to decrease over time" because "most early EV adopters live in detached homes where it is relatively easy to install a home charger, and have relied on low-cost, overnight, at-home charging for their primary charging needs." Additionally, modelling results from the report quantify that over 324,000 charging ports (*e.g.*, private and shared access and public direct-current fast chargers) will be required by 2030. Thus, there are other issues to consider before adoption of the ZEV requirements included in ACC II.

Conclusion

In conclusion, EIB should refrain from adopting the following California programs: Advanced Clean Cars II, Advanced Clean Trucks, and Heavy-Duty Engine and Vehicle Omnibus. EIB should instead, consider alternatives that could result in achieving the societal goals of reducing carbon emissions in a way that is faster and more cost effective for the people of New Mexico.

API members are applying their abilities to solve the complex challenges of emissions reductions in the transportation sector in a manner that will provide affordable and reliable products that allow consumers in New Mexico, and nationwide, the ability to choose the transportation mode that meets their needs while meeting the policy objectives of reducing transportation emissions. To that end, API welcomes discussion on viable solutions to the dual challenge of ensuring reliable and affordable energy supplies to support economic growth and human prosperity, while advancing environmental progress.

Respectfully submitted,

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2021," prepared for the American Petroleum Institute by PwC in April 2023).

[17] "Assess the Battery-Recharging and Hydrogen-Refueling Infrastructure Needs, Costs and Timelines Required to Support Regulatory Requirements for Light-, Medium-, and Heavy-Duty Zero-Emission Vehicles." by ICF for Coordinating Research Council, Inc., September 2023.