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Environmental Improvement Board Administrator,
New Mexico Environment Department
Harold Runnels Building,
P.O. Box 5469, Santa Fe, NM 87502.

RE: EIB 23-56 (R) - In the Matter of Proposed Amendments to 20.2.91 NMAC – New Motor Vehicle Emission Standards.

Submitted via nmed.commentinput.com and email to: pamela.jones@env.nm.gov

I. Introduction and Summary.

A. AFPM and its interest in the New Mexico Department of Environmental Protection's proposed adoption of ACC II.

The American Fuel & Petrochemical Manufacturers (AFPM) appreciates the opportunity to comment on the New Mexico Environment Department (NMED) proposal to adopt California's Advanced Clean Car II (ACC II) standards, mandating the electrification of the New Mexico vehicle fleet. AFPM is a national trade association representing nearly all U.S. refining and petrochemical manufacturing capacity. AFPM members support more than three million quality jobs, contribute to our economic and national security, and enable the production of thousands of vital products used by families and businesses every day. AFPM members are also leaders in producing lower carbon fuels, such as renewable diesel and sustainable aviation fuel.

AFPM shares NMED's goal of reducing carbon emissions from transportation. Indeed, our members are investing heavily in technologies and processes that continue to reduce the carbon intensity of fuels while automakers are improving the fuel efficiency of internal combustion engines. Importantly, these investments can reduce carbon intensity of new and existing vehicles without relying on a lengthy automobile fleet turnover or trillions of dollars to massively expand the electrical transmission grid. Reducing carbon emissions from the transportation sector while meeting myriad consumer needs will require a diverse mix of technologies, including liquid transportation fuels and electric vehicles. Innovation and competition among technologies will achieve the State's carbon reduction goals while delivering better results for consumers. Putting aside its serious legal and analytical infirmities, NMED's proposal does exactly the opposite—it stifles innovation and reduces competition by ignoring the fundamental importance of liquid fuels in delivering affordable and reliable energy while reducing emissions. NMED should withdraw this proposal.

B. Summary of AFPM's reasons for opposing NMED's proposal.

NMED proposes to adopt the California Air Resources Board's (CARB) ACC II standards, but it is preempted from doing so. The measures called for in the California ACC II rules (and therefore NMED's proposal) are expressly preempted and in conflict with federal legislation including the Energy Policy and Conservation Act (EPCA) and the federal Clean Air Act (CAA) and is contrary to federal statutory objectives set forth in the Renewable Fuel Standard (RFS) and other federal programs promoting (renewable) liquid fuels.

Furthermore, NMED's analysis supporting its proposed adoption of ACC II is arbitrary and capricious. Where it does not simply adopt CARB's analysis wholesale without meaningfully adjusting for the differences between the two states, NMED's analysis contains unsupported, inaccurate assertions that misstate the actual costs and benefits of its proposal. For example, NMED fails to adequately investigate whether its electric grid can handle the significant increase in demand for electricity that its adoption of ACC II will create, the potential electricity costs to consumers, the lifecycle emissions impacts of expanding electricity generation and transmission as well as electric vehicle (EV) production, the rising price of critical minerals needed for batteries, and the prospect of "leakage" as NMED forces New Mexico residents to travel to surrounding states to buy internal combustion engine vehicles (ICEVs).[1]

NMED has not considered the broader geopolitical context against which it acts: the United States depends, and will necessarily continue to depend, on China and other foreign countries, for the minerals and metals (particularly copper) used to produce batteries and expand the electrical grid.[2] Adopting policies like ACC II only increases that dependence. A transition to so-called Zero Emission Vehicles (ZEVs)[3] exposes New Mexico residents to supply chain vulnerabilities largely beyond the control of regulators. This risk is exacerbated by long supply chains[4] and a reliance on geopolitical rivals who control those supply chains.[5]

Section II of these comments discusses federal preemption of ACC II and pending litigation, while Section III addresses the constitutional barriers to adopting ACC II. Section IV describes the administrative infirmities that render this rulemaking arbitrary and capricious and unlawful. Section V describes some of the unintended consequences of California's initial foray into EV mandates under ACC I.

II. ACC II is preempted by federal law.

Congress has not authorized federal agencies or states to force a transition to EVs through government mandates.[6] Indeed, this is a major policy question that is the subject of several lawsuits pending before the D.C. Circuit. When Congress has spoken on vehicle electrification,

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[1] *See also* Ramboll, Multi-Technology Pathways To Achieve California's Greenhouse Gas Goals: Light-Duty Auto Case Study (May 31, 2022), Sec. 1.1 of AFPM's attached comments on California's ACC II proposal (*see* Attachment A): "CARB has not conducted a full life cycle GHG analysis for the vehicle/fuel system to assess GHG emission impacts of their proposal and alternatives. CARB did not consider the upstream fuel cycle GHG emissions from out-of-state fuel production and transportation activities for California reformulated gasoline (CaRFG) and hydrogen (H2), and vehicle cycle GHG emissions associated with the vehicle production. These life cycle emissions are significant, particularly for battery electric vehicles (BEVs) as compared to internal combustion engine vehicles (ICEVs), due to the energy-intensive nature of producing a BEV battery. Failure to consider these GHG emissions has the effect of overstating the emissions benefits of the proposed ACC II regulation."

[2] As such, New Mexico's adoption of ACC II conflicts with the dormant foreign affairs preemption doctrine under the Supremacy Clause, which preempts state laws that intrude on the exclusive federal power to conduct foreign affairs.

[3] On an LCA basis, of course, there is no such thing as a "zero-emission" vehicle since all vehicles have associated upstream and downstream emissions.

[4] *See* 2022 Global EV Outlook IEA (May 2022) at 6-7, 178-79, available at https://www.iea.org/reports/global-ev-outlook-2022 (accessed August 3, 2023).

[5] *Id.*

[6] *See West Virginia v. EPA*, 142 S. Ct. 2587 (2022).

it specifically prohibited EV mandates,[7] required studies,[8] and provided financial incentives with strict eligibility limits based on domestic production requirements and income levels.[9] Forcing a transition to EVs and banning the sale of ICEVs would constitute a major question of political and economic significance for which Congress must provide a clear statement; no such clear statement exists, particularly for giving *one state*—California—authority to address global climate change that is denied other similarly situated states. As detailed in AFPM's comments on EPA's Notice of Proposed Rulemaking: Multi-Pollutant Emissions Standards for Model Year 2027 and Later Light-Duty and Medium-Duty Vehicles (hereinafter referred to as "AFPM LDV Comments" and included as Attachment B), and AFPM's comments on NHTSA's Notice of Proposed Rulemaking: Corporate Average Fuel Economy Standards for Passenger Cars and Light Trucks for Model Years 2027–2032 and Fuel Efficiency Standards for Heavy-Duty Pickup Trucks and Vans for Model Years 2030–2035 (hereinafter referred to as "AFPM NHTSA Comments" and included as Attachment D) the question of whether to shift from ICEVs to EVs, and how to accomplish this shift, will reshape the U.S. automotive market and would have vast economic and political significance for New Mexico and throughout the country.[10]

A. ACC II is expressly preempted by the Energy Policy Conservation Act.

EPCA expressly preempts states from adopting or enforcing any regulation "related to" fuel-economy standards. This provision is extremely broad and self-executing, meaning no agency action is necessary for it to be effective. Moreover, Congress did not authorize NHTSA or EPA to waive this preemption provision, nor would EPA granting a waiver make ACC II a federal standard that is outside the scope of NHTSA's preemption provision.[11]

ACC II is clearly related to fuel-economy standards. Courts have found that state regulations "relate [ ] to" federal matters when they have a "connection with" or contain a "reference to" these matters.[12] NMED cannot avoid EPCA's preemptive effect by characterizing this rule as an environmental regulation despite its clear implications for fuel economy. Indeed, because carbon dioxide emissions are "essentially constant per gallon combusted of a given type of fuel," the fuel economy of a vehicle and its carbon-dioxide emissions are two sides of the same coin.[13] Accordingly, "any rule that limits tailpipe [greenhouse gas] emissions is effectively identical to a rule that limits fuel consumption."[14] Any proposed rule establishing ZEV mandates (and thus *de facto* average fuel economy standards) impedes NHTSA's ability to establish fuel economy standards that satisfy EPCA's requirements.[15]

An EV mandate thus has more than a mere "connection with" fuel economy—it has a direct connection, and courts have had little trouble finding federal preemption of state laws promoting

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[7] *See* 49 U.S.C. § 32902(h) (prohibiting considering dedicated automobiles, which includes EVs).
[8] *See* EISA § 206.
[9] *See* generally Inflation Reduction Act.
[10] *See* AFPM LDV Comments (Attachment B) at 17-21.
[11] *See* Brief of Petitioners of the States of Ohio et al., *State of Ohio v. EPA*, Case No. 22-1081 (D.C. Cir.), Document #1969895 (Oct. 20, 2022), 39-41, incorporated by reference herein.
[12] *See e.g.*, *California Restaurant Association v. City of Berkeley* (9th Cir. April 17, 2023).
[13] Fed. Reg. at 25,324, 25327 (May 7, 2010).
[14] *Delta Constr. Co. v. EPA*, 783 F.3d 1291, 1294 (D.C. Cir. 2015).
[15] See AFPM LDV Comments (Attachment B) at 25-26.

hybrids or EVs.[16] New Mexico's adoption of ACC II "relate[s] to" fuel economy even more clearly than the New York taxi rules at issue in *Metropolitan Taxicab* and is thus expressly preempted by EPCA.

B. New Mexico may not adopt ACC II because it is expressly preempted by the Clean Air Act.

ACC II are also expressly preempted by the CAA, which provides that "No State or any political subdivision thereof shall adopt or attempt to enforce any standard relating to the control of emissions from new motor vehicles...."[17] Unlike EPCA, EPA may grant California a preemption waiver under the CAA under certain conditions.[18] Before a waiver can be granted, the CAA requires EPA to evaluate California's waiver request to ensure that California did not arbitrarily determine that it needs "ZEV mandates" to address compelling and extraordinary circumstances. Practically speaking, EPA should deny California's ACC II waiver request. As our attached comments on CARB's ACC II proposal (Attachment A)[19] demonstrate, ACC II and CARB's analysis supporting it are flawed by CARB's failure to conduct an accurate lifecycle assessment (LCA) demonstrating ACC II is needed to address compelling and extraordinary conditions or that its benefits exceed its costs. The lack of compelling and extraordinary conditions is highlighted by the fact that a recent EPA report on air quality trends shows continued improvement of ambient air quality.[20] Moreover, EPA has never established a National Ambient Air Quality Standard (NAAQS) to address ambient greenhouse gas (GHG) concentrations, nor any requirements for states to implement plans and rules to reduce in-state, upwind, or downwind GHG concentrations. For these reasons, CARB's adoption of ACC II cannot qualify for a CAA preemption waiver.[21]

The Principal Deputy Administrator for the Office of Air and Radiation Joe Goffman testified on June 21, 2023, that EPA has not determined whether it will grant a waiver for ACC II and no such waiver has been granted to date.[22] If EPA grants a waiver to California, other states may choose to opt-in to California's standards, In the absence of a preemption waiver, NMED lacks authority to adopt ACC II.[23]

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[16] See, *e.g., Metropolitan Taxicab Bd. of Trade v. City of New York*, 615 F.3d 152, 157 (2d Cir. 2010) (holding EPCA preempts local taxi-fleet rules merely encouraging the adoption of hybrid taxis).
[17] 49 U.S.C. § 7543(a).
[18] *Id. at* § 7543(b).
[19] Available at https://www.arb.ca.gov/lists/com-attach/477-accii2022-AHcAdQBxBDZSeVc2.pdf (accessed August 3, 2023).
[20] U.S. EPA, Our Nation's Air: Trends Through 2022, available at https://gispub.epa.gov/air/trendsreport/2023/#home (accessed August 3, 2023).
[21] *See* AFPM LDV Comments Attachment B at p. 28. AFPM incorporates these comments by reference.
[22] Moreover, because California concedes ACC II will not meaningfully address the impacts of climate change in California and ACC II will slow fleet turnover and retard California's progress toward meeting the NAAQS, California and New Mexico are not eligible for a waiver.
[23] See *Am. Auto. Mf'rs Ass'n v. Comm'r, Mass. Dep't. of Envt'l Prot*., 998 F. Supp. 10, 17-18 (D. Mass. 1997) ("A state regulation relating to control of emissions from new motor vehicles or engines can survive

New Mexico is additionally preempted because the NMED Proposal does not meet the conditions provided in CAA Sec. 177, specifically providing that states may only adopt California standards when "such standards are identical to the California standards for which a waiver has been granted for such model year…."[24]

Furthermore, CAA Section 209(b) violates the U.S. Constitution's equal sovereignty doctrine, since it grants authority to set motor vehicle standards only to California—it gives California a greater degree of sovereignty than other states. This is especially true as applied to standards aimed at global climate change. Because CAA Section 209(b) is unconstitutional, both it and CAA Section 177 are void and cannot authorize NMED's rules, which are therefore preempted by CAA Section 209(a).

C. NMED must not finalize the ACC II rule before ongoing litigation concludes.

NMED's proposed adoption of ACC II is premature and presumes California has authority to promulgate ACC II. There are multiple lawsuits before the D.C Circuit arguing that EV mandates are preempted by the CAA, by EPCA, or by the RFS.[25] As we explain elsewhere in these comments, ACC II is in fact preempted.[26] Moreover, the pending litigation challenges the constitutionality of the CAA preemption-waiver mechanism as well as its specific application in the case of California's motor vehicle GHG emission regulations.[27] NMED should wait until this litigation is resolved before adopting ACC II. To adopt ACC II now risks considerable disruption and whipsawing of regulated parties' and other stakeholders' expectations and investments, as well as wasted NMED resources.

D. ACC II conflicts with important federal statutory objectives.

Rather than independently analyze ACC II impact and feasibility for the State of New Mexico, NMED simply relies on CARB's analysis. In its haste to phase out the oil and gas production and refining industries, CARB did not consider the impact of ACC II on the remainder of our energy system. ACC II will sharply curtail, if not eliminate, the demand for renewable fuels, and will create demand that will overburden the electricity generation and transmission systems. Nor did CARB consider the impact on other essential products such as jet fuel, asphalt, sulfur, petrochemicals, and lubricants. This willful blindness and tunnel vision places ACC II on a

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pre-emption if, in accordance with [Clean Air Act] § 177, it adopts and enforces standards which are 'identical to the California standards' for which the EPA has granted a waiver 'for such model year.' But a state may not either adopt or enforce a standard which does not meet these requirements. Put another way, under § 177, a state can pass regulations only if it accepts as the basis for its regulations a California "standard" which has been granted a waiver in accordance with § 209(b))." (citation omitted) (emphasis added)) (granting summary judgment for plaintiff and holding preempted Massachusetts state ZEV production, delivery, and reporting requirements).

[24] CAA § 177, 42 U.S.C. § 7507 (emphasis added).

[25] *Id. See also* Interv. For Pet'r Br*., NRDC v. NHTSA*, Doc. 1976944 (Dec. 8, 2022) (D.C. Cir. No. 22-1080) (arguing EV mandates are impliedly preempted by the Renewable Fuel Standard).

[26] *See generally Ohio v. EPA*, No. 22-1081 (D.C. Cir. filed May 5, 2022). See also *Texas v. EPA*, No. 22-1144 (D.C. Cir. filed June 30, 2022) (challenging Department of Transportation's Corporate Average Fuel Economy (CAFE) rulemaking, alleging violation of statutory prohibition on incorporating EV mandates into such regulations).

[27] *See Ohio v. EPA*, (D.C. Cir. No. 22-1081) *oral argument scheduled on* September 15 (The D.C. Circuit may not resolve the matter until 2024, with potential Supreme Court certiorari proceedings to follow).

collision course with multiple Congressionally mandated programs expressly designed to have the opposite impact: Congress wants to increase bio and renewable fuel production and ensure a reliable electricity supply.[28] Because ACC II undermines and conflicts with these Congressional objectives, ACC II—and NMED's adoption of it—are necessarily preempted.

It is a "well-established principle that the Supremacy Clause, U.S. Const., Art. VI, cl. 2, invalidates state laws," like ACC II, "that interfere with, or are contrary to federal law."[29] Even where Congress has not completely displaced state regulation in a specific area, state law is nullified to the extent that it conflicts with federal law. Such conflicts arise "when compliance with both state and federal law is impossible" or "when the state law 'stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress.'"[30] The ACC II program fails on both counts and is, therefore, expressly and/or impliedly preempted by federal law.

First, Congress's intention to increase production, distribution, and use of bio and renewable fuels is expressed in no less than three statutes, which do everything from mandating bio and renewable fuel blending in conventional liquid fuel to incentivizing its production through loans and loan guarantees. EPCA includes provisions related to the integration of alternative fuels in the transportation sector and requires a "reasonable distribution" of the burden of any energy-use restrictions.[31] NMED's adoption of ACC II would eliminate any role for these alternative fuels for new vehicles in New Mexico by requiring 82% ZEV by 2032, removing a substantial portion of the demand for these fuels and depriving federal investments of significant value. This deprivation is made worse by the fact that Maine, New York, Delaware, Maryland, Connecticut, Rhode Island, Colorado and other Sec. 177 states may adopt or have unlawfully adopted California's engine and motor vehicle emission standards under CAA Section 177, 42 U.S.C. § 7507, and the potential that manufacturers are unlikely to produce two separate fleets to satisfy

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[28] *See* 42 U.S.C. §§ 7545 et seq. (RFS) and the Energy Independence and Security Act (EISA), 42 U.S.C. ch. 152 § 17001 et seq.
[29] *Hillsborough Cty., Fla. v. Automated Med. Lab'ys, Inc.*, 471 U.S. 707, 712-13 (1985) (citations omitted).
[30] *Capital Cities Cable, Inc. v. Crisp*, 467 U.S. 691, 699 (1984) (quoting *Hines v. Davidowitz*, 312 U.S. 52, 67 (1941)) ("Under the Supremacy Clause of the United States Constitution, federal law preempts contrary state law. In general, the types of preemption recognized by federal courts can divided into three categories: express preemption, field preemption, and conflict preemption. Express preemption occurs when Congress preempts state law in express terms. Field and conflict preemption, by contrast, take a more contextual approach. Field preemption exists when it is clear, despite the absence of explicit preemptive language, that Congress has intended, by legislating comprehensively, to occupy an entire field of regulation and has thereby left no room for the States to supplement federal law. As for conflict preemption, even if Congress has not occupied the field, state law is naturally preempted to the extent of any conflict with a federal statute. Thus, conflict preemption exists when compliance with both state and federal law is impossible, or when state law stands as an obstacle to the accomplishment and execution of the full purposes and objective of Congress." (internal quotation marks and citations omitted)).
[31] *See* EPCA (42 U.S.C. § 6374, requiring alternative fuel use by light duty Federal vehicles), *id.* § 6391(b) (prohibiting "[u]nreasonably disproportionate share of burden" between segments of the business community and requiring that, "[t]o the maximum extent practicable, any restriction under authorities to which this section applies on the use of energy shall be designed to be carried out in such manner so as to be fair and to create a reasonable distribution of the burden of such restriction on all sectors of the economy").

177 states vs. the rest of the country. ACC II contradicts EPCA's requirement that any burdens stemming from energy-use restrictions be reasonably distributed across all industry sectors.

And the Energy Independence and Security Act (EISA) includes specific provisions to increase production of biofuels under the RFS program and requires blending of increasing volumes of bio and renewable fuels.[32] ACC II conflicts with these federal objectives and deprives federal funding programs of value by mandating complete electrification of the transportation sector. These programs set aside significant funding for the development and use of liquid fuels for transportation, with the expectation that these fuels will reduce carbon emissions from transportation and continue to play an important role in meeting transportation energy demand for many years.

Second, federal policy explicitly supports "the modernization of the Nation's electricity transmission and distribution system to maintain a reliable and secure electricity infrastructure that can meet future demand growth."[33] The ACC II program conflicts with this policy by introducing material security and reliability risks to California's electricity grid, and to the grid of New Mexico and other states who may adopt ACC II. AFPM discusses the significant national security and energy risks associated with *de facto* ZEV mandates in its comments to EPA's LDV proposal.[34] In short, ACC II increases reliance on imported critical minerals and metals for battery production and grid expansion that could have serious negative consequences for our energy and national security. The supply chain for key minerals needed to produce electric vehicle batteries is not assured and will require dramatic increases to meet expected demand.[35] The extraction and processing of battery critical minerals is concentrated in politically unstable or rival nations. Domestic copper and aluminum smelting capacity is insufficient to meet grid expansion needs, and new mines can take over a decade to increase domestic supply. The deployment timeline necessary to develop new resources for batteries and the grid is impracticable and presents unnecessary risks to our energy and economic security. In contrast, domestically consumed liquid fuels sourced from petroleum and bio feedstocks are largely sourced in North America, and the U.S. benefits from its position as a net exporter of petroleum and refined product exports.

Rapidly electrifying the transportation sector will both substantially increase electricity demand in New Mexico and other states that may adopt ACC II and increase dependence on electricity services. Electrification of the transport sector will stress an already fragile grid and amplify the risk that the grid will be targeted for either physical or cyber-attacks. A 2023 Government

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[32] EISA (Title 42, Chapter 152, Subchapter II: Programs for investment in biofuel research and infrastructure, centered around "increasing energy security," which is of special federal concern); 42 U.S.C. § 7545(o)(2)(B)(ii) (the RFS establishes requirements related to determining the applicable volume of cellulosic biofuel for the calendar years 2023 and later, based on considerations such as available infrastructure, consumer costs, and energy security). *See also* AFPM LDV Comments (Attachment B) at p. 21.

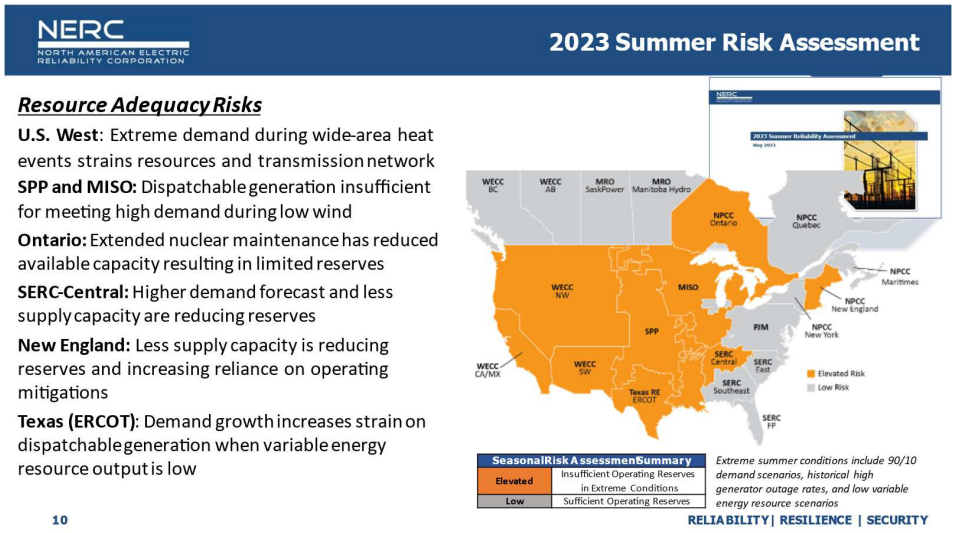
[33] 42 U.S.C. § 17381.

[34] AFPM LDV Comments (Attachment B) at 4-11.

[35] *See* International Energy Forum, Critical Minerals Outlook Comparison, August 2023 at 25 (although beyond the scope of the report comparing eleven studies on the demand for critical minerals, the authors noted geopolitics, high capital costs, ESG pressures and extended times to develop new mines "indicate a high risk for periods of demand exceeding supply," available at https://www.ief.org/focus/ief-reports/critical-minerals-outlooks-comparison

Accountability Office Report revealed that due to the increased connectivity from industrial control systems, the grid distribution systems grow more vulnerable to cybersecurity attacks.[36] According to the report, "threat actors can use multiple techniques to access those systems and potentially disrupt operations."[37] As demand increases due to accelerated electrification, grid reliability will pose a greater challenge due to additional resource buildout. As detailed in AFPM's LDV Comments, there is significant doubt that the U.S. electric grid can reliably support the proposal.[38] Demand for electric vehicle charging will place significant stress on generation, transmission, distribution, and consumer charging systems, that are unlikely to meet increased demand in such a short timeframe.[39] As recently reported by the North American Electric Reliability Corporation (NERC), while electricity supply has improved in 2023 versus 2022, several operating regions are still at-risk during periods of peak demand.[39] As shown in Figure 1, NERC's recent summer assessment shows roughly two-thirds of the U.S., including New Mexico and other Southwest states, face increased resource adequacy risk in the summer of 2023 before any additional increases in ZEV sales requirements under ACC I or ACC II.

Figure 1: NERC 2023 Summer Risk Assessment[40]



Further, the report found that increased use of networked consumer devices that are connected to the grid's distribution systems—including EVs and charging stations—also potentially introduce vulnerabilities because "distribution utilities have limited visibility and influence on the use and cybersecurity of these devices."[40]

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[36] Gov't Accountability Office, Cybersecurity High-Risk Series: Challenges in Protecting Cyber Critical Infrastructure, GAO-23-106441 (Feb. 2023), available at https://www.gao.gov/assets/gao-23-106441.pdf (Accessed August 24, 2023)
[37] Id.
[38] AFPM LDV Comments (Attachment B) at 13.
[39] *See* discussion at AFPM LDV Comments at 11-17 and 34-36. NMED should better assess grid impacts from a regional basis before mandating a rapid shift to EVs.
[40] Gov't Accountability Office, Electricity Grid Cybersecurity: DOE Needs to Ensure Its Plans Fully Address Risks to Distribution Systems, GAO-21-81, at 18.

ACC II will increase New Mexico's electricity demand, undermining federal requirements targeting increased grid reliability. The increased demand for electricity under New Mexico's proposed adoption of ACC II will likely stress New Mexico's grid and the grids of states adopting ACC II, potentially compromising grid reliability in direct contravention of federal policy.

Because NMED's proposed adoption of ACC II conflicts with and presents an obstacle to clearly stated federal objectives, NMED lacks the authority to promulgate these regulations—and indeed is preempted from doing so.

III. NMED's adoption of ACC II constitutes a regulatory taking requiring just compensation.

NMED's plan to eventually phase out the sales of all ICEVs constitutes a regulatory taking. AFPM members invested substantial amounts of money in making their refineries, terminals, distribution networks, and renewable fuel facilities efficient and productive to supply our nation with cost-effective fuels. Therefore, our members and the broader industry have significant investment-backed expectations with respect to their properties, at least some of which may be forced to close because of NMED's proposed adoption of CARB's EV mandate. New Mexico landowners also would be harmed. Landowners in the state receive compensation from renting their land to companies. Policies that shut down facilities in the petroleum supply chain, such as refineries, pipelines, and distribution terminals, would prevent companies and New Mexico landowners from realizing these investment-backed expectations. Thus, adopting ACC II would constitute a regulatory taking based on its substantial interference with these expectations, and the state would be obligated to provide just compensation for companies' losses.

Therefore, as NMED considers the potential costs of policies that would shut down fuel infrastructure and other facilities, it should—at a minimum—account for the estimated costs of just compensation for the loss of property use and interference with investment-backed expectations that would inevitably result.

IV. The adoption of ACC II constitutes arbitrary and capricious rulemaking.

Even if EPCA and the CAA did not preempt New Mexico from adopting ACC II, the proposed regulations are substantively deficient and based on incomplete analysis.

There are numerous issues of central relevance that NMED failed to analyze or simply imported from California without adjustments needed to reflect conditions that are different between California and New Mexico. These include the true lifecycle emissions caused by this rule, critical mineral dependence and supply, grid composition, the costs of required grid upgrades, the state and reliability of the charging network, EV total cost of ownership, differences in temperature and topography and their impact on vehicle performance and use, and safety considerations.

A. NMED may not overlook New Mexico's administrative requirements for enacting new regulations.

Under the New Mexico Air Quality Control Act, the board can adopt regulations to "prevent or abate air pollution,"[41] and such regulations "shall be at least as stringent as federal law, if any,

[41] N.M.S.A. § 74-2-5(A), (B)(1).

relating to control of motor vehicle emissions."[42] They must consider "(1) character and degree of injury to or interference with health, welfare, visibility and property; (2) the public interest, including the social and economic value of the sources and subjects of air contaminants; and (3) technical practicability and economic reasonableness of reducing or eliminating air contaminants from the sources involved and previous experience with equipment and methods available to control the air contaminants involved."[43] For rules "more stringent than the federal act or federal regulations . . . the environmental improvement board or local board shall make a determination, based on substantial evidence and after notice and public hearing, that the proposed rule will be more protective of public health and the environment."[44]

NMED does not actually demonstrate that adopting ACC II will abate, *i.e.,* reduce carbon dioxide emissions in total, which in turn implicates NMED's analysis of economic reasonableness and the impacts on health, welfare, and the economic value of the petroleum and ethanol production and distribution chain. As we explain here and in Section IV.D of these comments, and in our attached comments on CARB's ACC II proposal (Attachment A), in the absence of a proper and thorough lifecycle GHG emissions analysis, neither CARB nor NMED can demonstrate the aggregate GHG impact of ACC II and thus that it is proposing effective and practical controls. Our attached comments on CARB's ACC II proposal include a study from Ramboll that evaluated whether alternative vehicle technology and fuel pathways could achieve lifecycle GHG emission reductions similar to or greater than the ACC II proposal. Unlike CARB's and NMED's partial analyses, Ramboll evaluated the full lifecycle impacts of EV technologies under the ACC II proposal to more completely and properly characterize the potential near-term and long-term GHG emissions performance. Ramboll considered other pathways that would not require a replacement of the entire transportation infrastructure system, and that would also not require the wholesale transformation of electric energy production and distribution infrastructure on an unprecedented short time scale. Instead, these other pathways would allow battery, hydrogen, and lower-carbon intensity gaseous and liquid fueled vehicles to compete to achieve GHG targets for light-duty transportation in the quickest and most cost-effective manner while addressing emissions from the existing fleet. Ramboll's conclusions showed that CARB's attributions of GHG reductions to its proposed ACC II regulation were incomplete and emphasized the need for CARB to conduct a full lifecycle GHG emission assessment to quantify the cradle-to-grave effects of the draft ACC II proposal. CARB did not remedy these inadequacies in its analysis before adopting ACC II, and NMED's reliance on CARB's assessment suffers from the same deficiencies.

Even if CARB's analysis included the carbon emissions associated with battery production and had been otherwise adequate (which, as our attached comments on its proposal demonstrated, it was not), NMED cannot simply rely on CARB. NMED must conduct an adequate LCA of the effects of adopting ACC II on statewide GHG emissions. An adequate LCA would consider factors such as the mix of the fuel base for electricity supplied to the grid on which New Mexico's EVs will charge, expected miles traveled by New Mexico drivers, New Mexico temperature trends throughout the year and their effect on charging needs and battery capabilities, and many other state-specific factors.

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[42] N.M.S.A. § 74-2-5(E).
[43] N.M.S.A. §§ 74-2-5(F).
[44] N.M.S.A. § 74-2-5(G).

NMED's apparent dismissal of these administrative requirements, and adoption of analysis conducted by California for California underscores the arbitrary and capricious nature of the proposal.

B. NMED's analysis is based on unwarranted assumptions.

NMED provides no or inadequate support regarding cars, car components, and the costs of both. It mostly relies on CARB's analysis. Considering NMED's heavy reliance on CARB's analysis, we refer to and incorporate by reference our comments on CARB's ACC II proposal (Attachment A) and our comments to New York's proposed ACC II adoption (Attachment C).

Similar to other states "adopting" ACC II, NMED provides no analysis or support to demonstrate that there will be an adequate EV fleet to meet the requirements of its proposed adoption of ACC II. This is arbitrary in light of evidence in the public domain that NMED has ignored.[45] Moreover, NMED fails to consider whether the myriad direct and indirect federal and state subsidies required to bring current and future EVs into the marketplace are sufficient for EV sales and technology to be feasible, or whether these subsidies can even reasonably be expected to continue in their current state throughout the ramp-up required over the next decade and beyond under ACC II.[46]

Similarly, with respect to battery availability and costs, NMED provides no analysis of whether the likely future supply and demand trends for critical minerals and other battery components will allow for the necessarily massive supply ramp-up in conjunction with continued falling prices. A recent study comparing eleven reports evaluating critical mineral demand requirements for the energy transition concluded forecasting future critical mineral demand requirements is highly uncertain due to variations in energy markets, costs, and technological advancements.[47] Therefore, there is little basis for CARB's and NMED's conclusions that there will be ample critical minerals and battery components.

1. NMED failed to consider the feasibility of ACC II

The supply chain necessary to support new technologies contemplated by ACC II is not well established and is likely to increase dependence on critical minerals from foreign sources. Reliance on a limited number of technologies (e.g., ZEVs) on the timeline required by ACC II may result in a non-resilient transportation sector vulnerable to unexpected disruptions and cost increases. Unstable critical mineral supply chains could disrupt this future. ZEVs, as compared to ICEVs, have a much greater reliance on several critical minerals. NMED ignores the obvious benefits of a multi-technology approach that would reduce the risks associated with a ZEV-

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[45] Analyst data suggests that automobile manufacturers are unlikely to produce as many EVs as they had hoped. *See e.g.,* Keith Naughton, Ford CEO Sticks to 'Crazy High' EV Goal, Bloomberg News (May 19, 2023), available at https://www.bloomberg.com/news/articles/2023-05-19/ford-ceo-pitches-50-billion-ev-plan-to-challenge-tesla#xj4y7vzkg (Accessed August 8, 2023).

[46] Because passenger vehicles have domestic manufacturing and sourcing requirements in the IRA to be eligible for the clean vehicle tax credit and many of the required critical minerals are imported, it will be challenging for all vehicles to be eligible for the full federal clean car tax credit. *See* IRA, Section 45W(c) (The IRA requires 50% of the value of battery components to be produced or assembled in North America to qualify for a $3,750 credit and 40% of the value of critical minerals sourced from the United States or a free trade partner also for a $3,750 credit).

[47] International Energy Forum, Critical Minerals Outlook Comparison, August 2023 at 25-26.

focused approach. For example, Toyota recently noted in a memo to its dealers that "the amount of raw materials in one long range battery electric vehicle could instead be used to make 6 plug-in hybrid electric vehicles or 90 hybrid electric vehicles . . . the overall carbon reduction of those 90 hybrids over their lifetimes is 37 times as much as a single battery electric vehicle."[48] There are six minerals critical to the production of ZEVs: cobalt, copper, graphite, lithium, manganese, and nickel.[49]

Critical mineral supply, especially those essential to the manufacturing of a lithium-ion (Li ion) battery, is dominated by China, Australia, and the Democratic Republic of Congo.[50] Of the foreign nations that produce cobalt, molybdenum, and other minerals needed to produce ZEVs, China has disproportionate influence. While 70 percent of global cobalt production comes from the Democratic Republic of Congo, most of those mines are owned/operated by China, and more than 60 percent of cobalt processing is in China. Moreover, 67 percent of the world's graphite is also produced in China.[51] The U.S. imports most of its manganese from Gabon, a less politically stable country that just experienced a military coup, providing 65 percent of the United States' supply.[52] NMED has ignored these real-world conditions that it should be analyzing before jumping into this extreme transformation of our transportation fleet.

Expected supply from existing mines and projects under construction is estimated to meet only half of projected world demand for lithium and cobalt.[53] Establishing new mines, particularly in the United States, is not a near-term solution. Permitting and authorizing new domestic mining and smelting capacity requires a substantial amount of time and government support. According to the National Mining Association, it can take up to 10 years to obtain a permit to commence mining operations in the U.S.[54] "[U]nless the permitting process can be improved, U.S. mining developments will continue to take longer to come online and carry more financial risks compared with the rest of the world, China's domination of battery manufacturing and critical minerals production will continue for a longer period, and the U.S. will find it increasingly difficult to acquire the metals and minerals it needs for its long-term clean-energy goals."[55]

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[48] William Johnson, TESLARATI, "Toyota releases new defense of lagging EV strategy" (May 18, 2023). available at https://www.teslarati.com/toyota-defends-ev-strategy/.
[49] International Energy Administration, "The Role of Critical Minerals in Clean Energy Transitions," (revised March 2022) available at https://www.iea.org/reports/the-role-of-critical-minerals-in-clean-energy-transitions. [hereinafter IEA Report 2022].
[50] Turner, Mason & Company. "Evaluation of EPA's Assumptions and Analyses Used in Their Proposed Rule for Multi-Pollutant Emissions Standards" (June 7, 2023) (Research funded by AFPM and available upon request) [hereinafter "Turner Mason Report"].
[51] G.R. Robinson, et al., U.S. GEOLOGICAL SURVEY, "Professional Paper 1802 Critical mineral resources of the United States—Economic and environmental geology and prospects for future supply" (Dec. 19, 2017) p. J1–J24, available at https://doi.org/10.3133/pp1802J.
[52] OEC, "Manganese Ore in the United States" (Mar. 2023) available at https://oec.world/en/profile/bilateral-product/manganese-ore/reporter/usa.
[53] Axios Generate, The supply crunch that could slow the climate fight, (May 5, 2021).
[54] National Mining Association, Delays in the U.S. Mine Permitting Process Impair and Discourage Mining at Home, May 31, 2021. Available at https://nma.org/2021/05/13/delays-in-the-u-s-mine-permitting-process-impair-and-discourage-mining-at-home/.
[55] Jason Lindquist, Don't Pass Me By - With Many Steps Required, Mining Projects Face Trickiest Path To Approval, RBN Energy Blog (June 30, 2023).

As demand for these commodities grows, the market concentration (and ability to exert power over pricing) swings toward producers in less politically stable countries. If producer countries have market power, they have the potential to impact not only price, but the ability for consumer countries to influence other issues, such as sanctity of commercial contracts, labor and/or human rights, and environmental standards in producing jurisdictions. The significance of this issue is compounded by the fact that multiple critical minerals are needed for ZEV production, so a disruption in the supply of a single mineral can disable the entire supply chain. The operation of ICEVs, to the contrary, relies on natural resources for which there are abundant domestic supplies.

The supply chain necessary to support new technologies under ACC II is uncertain and is likely to increase dependence on critical minerals from foreign sources.[56] In the event of supply disruption or pricing volatility related to geopolitical pressures, the U.S. is highly exposed as it heavily relies on imports to satisfy domestic demand in each of these critical minerals.[57] Except for copper, the U.S. does not produce significant quantities of these critical minerals. And, despite the U.S. having substantial domestic copper mining, it still relies on imports to meet 45 percent of U.S. demand.[58] China's dominance does not stop at critical mineral extraction and processing. "Two of China's largest battery companies control more than half of the global market resulting in up to 90% of the EV battery supply chain relying solely on China."[59] Conversely, the United States plays a small role in the global electric vehicle (EV) supply chain, with only 7 percent of battery production capacity.[60] "With a heavy dependence on China, the United States is at a disadvantage in its role in the global EV supply chain."[61]

"Between January 2022 and January 2023, the cost of lithium increased by almost 45%."[62] By May 2023, "battery costs were $110.7/kWh, which was driven by China's increased lithium carbonate price during its EV market recovery."[63] Indeed, battery costs rose 7 percent in 2022,

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[56] *See e.g.*, Shelley Challis, POST REGISTER, "Jervois shuts down Idaho Cobalt mine" (Apr. 7, 2023), available at https://www.postregister.com/messenger/news/jervois-shuts-down-idaho-cobaltmine/article_efd97f32-d015-11ed-9424-bfb28220210c.html.

[57] China announced it will restrict the export of two metals (gallium and germanium) used in EV production. While these metals are not particularly rare, China could limit export of processed key EV battery minerals to maintain its supply chain dominance. See Archie Hunter & Alfred Cang, China Restricts Export of Chipmaking Metals in Clash with US, July 3, 2023. Bloomberg, available at https://www.bloomberg.com/news/articles/2023-07-03/china-to-restrict-exports-of-metals-critical-to-chip-production#xj4y7vzkg.

[58] *See* AFPM LDV Comments at 38-40 for additional discussion regarding the lack of critical minerals needed for battery production.

[59] Morgan Stanley, "Rewiring the Supply Chain for Electric Vehicle Batteries, (July 2023), https://www.morganstanley.com/ideas/ev-battery-lithium-supply.

[60] RMI, "The EV Battery Supply Chain Explained," (May 2023), https://rmi.org/the-ev-battery-supply-chain-explained/#:~:text=Today%2C%20the%20United%20States%20is,strengthen%20the%20US%20downstream%20sector.

[61] Morgan Stanley, "Rewiring the Supply Chain for Electric Vehicle Batteries, (July 2023), https://www.morganstanley.com/ideas/ev-battery-lithium-supply.

[62] International Energy Agency, "Trends In Batteries," (April 2023) https://www.iea.org/reports/global-ev-outlook-2023/trends-in-batteries.

[63] Mining.com, "EV battery prices rise for the first time in 2023," (June 2023), https://www.mining.com/ev-battery-prices-rise-for-first-time-in-2023/

and lithium-ion battery pack prices have recently begun to rise, even before the true impacts of ACC II are felt.[64] With EPA's and other developing nations' push to electrify transportation and the concomitant need to deploy utility-scale batteries, the demand for lithium (and other critical minerals) is expected to grow exponentially. While prices for key battery metals like lithium, nickel and cobalt have moderated slightly in recent months, Bloomberg New Energy Finance (BNEF) expects average battery pack prices to remain elevated in 2023 at $151/kWh.[65] Ample research and commentary warn that critical mineral and battery component supply issues will form a major obstacle to the type of EV ramp-up the proposal assumes will happen seamlessly.

To meet the mandates set by ACC II, the original equipment manufacturers (OEMs) must secure adequate amounts of raw materials in a short time. With the projected supply and demand gap that many analysts foresee, pricing of critical minerals will remain volatile as occurred through the early 2020s. Morgan Stanley estimates EV makers will need to increase prices by 25 percent to account for rising battery prices.[66] Battery raw materials are not commodities, they are classified as specialty chemicals, so pricing should not be analyzed according to traditional commodity pricing structures, especially given that these supplies are geographically concentrated in areas with geopolitical instabilities. Each OEM, cathode or anode producer, and battery manufacturer have their own specifications for the materials, and thus the raw materials must be refined and tested to meet their bespoke specification. Spot markets for battery materials are virtually non-existent and unlikely to develop in the near term.

Consumers are directly affected with higher EV costs, particularly when lower cost ICEVs are no longer available. Although there are various federal and state subsidies and incentives to partially offset higher vehicle and infrastructure costs associated with ACC II, NMED does not analyze whether this state of affairs is likely to last. The potential loss of EV subsidies and incentives affects the cost analysis and overall viability of the regulatory program. Setting aside whether California, New Mexico, or any state has authority to create ZEV credits, the costs of those subsidies, which are borne by gasoline vehicle buyers in other states (without their knowledge) must be evaluated by NMED.[67] The IRA has incentives to reduce battery prices, but this law simply extended the existing battery subsidy and even limited its applicability through domestic sourcing and income requirements. Thus, NMED and other states are relying on an existing program that has been curtailed for the proposition that it will lower battery prices in the

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[64] BloombergNEF, Lithium-ion Battery Pack Prices Rise for First Time to an Average of $151/kWh (Dec. 6, 2022); Graham Evans, A reckoning for EV battery raw materials (S&P Global Mobility Oct. 31, 2022), available at https://www.spglobal.com/mobility/en/research-analysis/a-reckoning-for-ev-battery-raw-materials.html (Accessed August 8, 2023); Mark P. Mills, The "Energy Transition" Delusion: A Reality Reset (Manhattan Institute Aug. 2022), at 8, 10, available at https://media4.manhattan-institute.org/sites/default/files/the-energy-transition-delusion_a-reality-reset.pdf (accessed August 8, 2023). *See also* AFPM LDV Comments (Attachment B) at 49-51 for detailed discussion of battery costs.

[65] BLOOMBERGNEF "Lithium-ion Battery Pack Prices Rise for First Time to an average of $151/kWh" (Dec. 6, 2022) *available at* https://about.bnef.com/blog/lithium-ion-battery-pack-prices-rise-for-first-time-to-an-average-of-151-kwh/ (Accessed September 25, 2023).

[66] *See* James Thornhill, Morgan Stanley Flags EV Demand Destruction as Lithium Soars (Bloomberg Mar. 24, 2022), available at https://www.bloomberg.com/news/articles/2022-03-25/morgan-stanley-flags-ev-Demand-destruction-as-lithium-soars (last visited May 24, 2023).

[67] ACC II is largely funded on the backs of gasoline (and diesel) car buyers, through credit transfers and payments between automakers that hide the true costs of EVs. This scheme violates Federal (and State) laws that prohibit unfair or deceptive acts or practices in or affecting commerce.

future. However, those seeking to adopt ACC II simultaneously ignore that the increase in demand for batteries will raise their price. Moreover, NMED does not consider the market implications of an increasing percentage of vehicle sales depending on cross-subsidies from a shrinking number of gasoline vehicle buyers. As stated in a recent Wall Street Journal article, in 2023 car inventory increased yet there is a lack of buyers. High interest rates keep potential buyers at a distance while there are an increasing number of defaults on auto loans for current owners. Dealership owners grapple with getting cars off their lots with an optimal supply, but very minimal demand.[68] NMED must account for the costs and market impacts described in the following sections, which currently are ignored in its proposal.

2. NMED's cost analysis is woefully inadequate.

Rather than conduct its own analysis of the total cost of ownership for New Mexico consumers, NMED relies on CARB's analysis, which assesses costs for California, not New Mexico. This fact alone renders NMED's analysis deficient. Nonetheless, we offer the following comments on CARB's total cost of ownership analysis.

a. Purchase Price

While CARB and NMED acknowledge EVs have a higher purchase price than ICEVs, these states incorrectly assume that every ZEV will be eligible for the maximum federal purchase incentive. It is arbitrary and capricious for NMED to ignore the likelihood that battery raw materials will not be produced in the U.S. or available for import from credit-qualifying countries, given China's dominance in processing critical minerals needed for ZEV batteries and the manufacture of ZEV batteries. Consequently, it is unrealistic to assume ZEV purchases will be eligible for the full incentive which is tied to domestic manufacturing requirements (and household income limits).

NMED ignores that battery prices began to rise due to limited supply of minerals.[69] While there are a few affordable EVs, these EVs typically have a range below 200 miles on a full charge.[70] If consumers want longer range EVs, they will pay a considerable purchase price as seven of the top ten, range-rated EVs cost anywhere from $74,800 to $110,295.[71] In the first calendar quarter of 2022, the average price of the top-selling light-duty ZEV in the U.S. was about $20,000 more than the average price of top-selling ICEV.[72] The price disparity has not

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[68] Ben Foldy, "Car Prices Might be Unsustainable for Car Buyers," The Wall Street Journal (Aug. 21, 2023), at https://www.wsj.com/personal-finance/car-prices-might-be-unsustainable-for-buyers-18d7b395.
[69] BLOOMBERGNEF "Lithium-ion Battery Pack Prices Rise for First Time to an average of $151/kWh" (Dec. 6, 2022) available at https://about.bnef.com/blog/lithium-ion-battery-pack-prices-rise-for-first-time-to-an-average-of-151-kwh/.
[70] *See* Sebastian Blanco, *List of EVs Sorted by Range* (Sept. 1, 2022), http://www.jdpower.com/cars/shopping-guides/list-of-evs-sorted-by-range.
[71] *See* Nicholas Wallace, Austin Irwin, & Nick Kurczewski, Longest Range Electric Cars for 2023, Ranked (Mar. 23, 2023), https://www.caranddriver.com/features/g32634624/ev-longest-driving-range/.
[72] Registration-weighted average retail price for the 20 top-selling ZEVs and ICEVs in the U.S. S&P Global, Tracking BEV prices – How competitively-priced are BEVs in the major global auto markets? May 2022.

improved, with the average price of light-duty EVs near $66,000 in August 2022 and continuing to rise.[73]

b. Cross-subsidies

Noticeably absent from CARB's and NMED's analysis is cross-subsidization. A ZEV typically costs tens of thousands of dollars more to produce than a comparable ICEV due primarily to the surging costs of critical minerals and resulting high costs of batteries.[74] ACC II will force manufacturers to sell an increasing percentage of ZEVs each year that goes far beyond the consumer demand for the product at its true cost. To ensure compliance with the ZEV mandate under ACC II, manufacturers will be forced to incentivize ZEV purchases through a practice called cross-subsidization.

Automobile cross-subsidization is a pricing strategy to spread the high cost of ZEVs across a manufacturer's other product offerings. Under this pricing convention, manufacturers set the prices of certain ICEVs higher than their production costs to generate additional profits that can then be used to offset losses incurred by selling ZEVs below their actual production costs. This practice operates as a hidden tax on ICEVs and results in the purchasers of ICEVs subsidizing the sale of ZEVs. Without cross-subsidies, ZEV mandates would fail.

While opaque, the magnitude of ZEV cross-subsidies is significant. Ford's decision to report EV financial information separately beginning in 2023 provides an additional glimpse into the magnitude of cross-subsidization. Ford lost approximately $58,000 for each ZEV car it sold during the quarter.[75] This reported per-vehicle loss is more than an order of magnitude greater than EPA's estimates of the price differential between the two technologies. Ignoring actual ZEV production costs, including credit trading costs, is arbitrary and capricious. These costs are ultimately borne by purchasers of ICEVs through cross subsidization.

c. Total cost of ownership[76]

The cost of ZEV ownership is higher than assumed by CARB and NMED. CARB's analysis presumes a consumer savings on ZEV maintenance, yet neglects to consider the differing ownership and use profiles, and the significant cost of battery replacement. One cannot assume

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[73] Andrew J. Hawkins, EV prices are going in the wrong direction (The Verge Aug. 24, 2022), available at https://www.theverge.com/2022/8/24/23319794/ev-price-increase-used-cars-analysis-iseecars accessed May 24, 2023; see also Justin Banner, Latest Ford F-150 Lightning Price Hike Hands Chevy Silverado EV a $20K Advantage--The least-expensive electric F-150 Lightning now costs $4,000 more than it did late last year (Motortrend Mar. 30, 2023), available at https://www.motortrend.com/news/2023-ford-f-150-lightning-pro-price-increase-msrp/ accessed May 24, 2023.

[74] *See* PCMag, Profit vs. the Planet, (Sept. 26, 2022), Profit vs. the Planet: Here's Why US Automakers Are All-In on Electric Vehicles | PCMag https://www.pcmag.com/news/profit-vs-the-planet-heres-why-us-automakers-are-all-in-on-electric-vehicles accessed July 3, 2023 ("EVs are currently more expensive to manufacture than gas-powered vehicles because of spiking battery costs. The cost of lithium, the main ingredient, has skyrocketed since demand far exceeds the number of working mines that can supply it.").

[75] *See* Luc Olinga, TheStreet, Ford Loses Nearly $60,000 for Every Electric Vehicle Sold, (May 2, 2023) available at https://www.thestreet.com/technology/ford-loses-nearly-60000-for-every-electric-vehicle-sold accessed July 3, 2023.

[76] *See* AFPM LDV Comments (Attachment B) at 55-56 and AFPM CARB Comments (Attachment B) at B8-B13.

a new ICEV and a new ZEV will travel the same miles each year. EVs have less range, both technically and practically. As noted by J.D. Power, "the majority of EVs provide between 200 and 300 miles of range on a full charge."[77] One study shows that the average 3-year-old electric car is driven 9,059 miles per year, compared with 12,758 miles for ICEVs.[78] Other research suggests EVs travel only 5,300 miles per year.[79]

NMED also neglects to fully account for higher insurance costs of ZEVs. Insurance premiums for PHEVs are typically higher than comparable ICEVs because of higher repair costs. According to ValuePenguin, insurance on a PHEV, depending on the model, could be 19 percent to 32 percent higher than a comparable ICEV.[80] Another estimate from an October 2022 study from Self Financial concludes PHEVs' annual insurance is $1,674, $442 more compared to an ICEV annual insurance premium of $1,232.[81] NMED discussed routine maintenance savings from EV ownership, yet simultaneously ignores these repair costs differentials. This is another example of arbitrary rulemaking.

NMED and CARB assume lower retail fuel costs for ZEVs than liquid fuels. Real-world data squarely contradicts NMED's and CARB's cost assumptions on EV charging. For example, California's ZEV mandates have contributed to the inflationary impacts on energy prices. According to a 2021 California Public Advocates Office presentation to the California Public Utilities Commission, "it is already cheaper to fuel a conventional internal combustion engine (ICE) vehicle than it is to charge an EV" in the San Diego Gas & Electric Co. service area.[82] This is astonishing given that gasoline prices in California are the second highest in the nation, averaging approximately $4.01 per gallon of gasoline at that time in 2021. According to an Anderson Economic Group article, entry-priced, gas-powered cars were significantly more affordable to fuel at $9.78 per 100 "purposeful miles" compared to the $12.55 at-home charging costs for an entry-priced EV.[83] Future projections afford consumers no relief, as the California Energy Commission projects that both commercial and residential electricity prices will continue to rise, reaching nearly $7 per gasoline-gallon equivalent for the commercial sector. Similarly,

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[77] *See* Sebastian Blanco, List of EVs Sorted by Range (Sept. 1, 2022), https://www.jdpower.com/cars/shopping-guides/list-of-evs-sorted-by-range accessed August 28, 2023.
[78] iSeeCars, *The Most and Least Driven Electric Cars* (May 22, 2023), https://www.iseecars.com/mostdriven-evs-study.
[79] Burlig, F., Bushnell, J., Rapson, D., Wolfram, C., "Low Energy: Estimating Electric Vehicle Electricity Use," National Bureau of Economic Research Working Paper 28451, http://www.nber.org/papers/w28451.
[80] ValuePenguin, How Much Does Electric Car Insurance Cost? https://www.valuepenguin.com/how-having-electric-car-affects-your-auto-insurance-rates accessed August 28, 2023.
[81] Self Financial, Electric Cars vs Gas Cars Cost in Each State https://www.self.inc/info/electric-cars-vs-gas-cars-cost/ accessed Augst 28, 2023.
[82] California Public Utilities Commission, "Utility Costs and Affordability of the Grid of the Future" (May 2021). Presentation from Mike Campbell, Public Advocates Office at 116-117 available at https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/office-of-governmental-affairs-division/reports/2021/senate-bill-695-report-2021-and-en-banc-whitepaper_final_04302021.pdf.
[83] Anderson Economic Group, "Some Cars Cheaper to Fuel with Gas Than Electric in 2023," August 1, 2023. Available at https://www.andersoneconomicgroup.com/many-gas-powered-cars-cheaper-to-fuel-than-electric-in-2023/.

many in the Boston-Cambridge-Newton area paid $0.34 per kWh in April 2023, which was nearly 107% higher than the national average.[84]

Charging pricing has been unpredictable, with some stations charging by the minute instead of charging for electricity consumed.[85] Other charging stations offer multiple subscription plans or charge different rates at various times of day, resulting in significant price increases over the past few months.[86] Boston charging companies raised charging fees in response to New England utilities increasing their rates to 39 cents per kilowatt-hour in February 2023, from 27 cents a year earlier.[87]

NMED must account for these real costs and assess these trends for New Mexico.

d. NMED fails to consider the cost of credits.

NMED fails to evaluate how government credits are embedded in vehicle pricing. For example, neither federal or state governments, nor auto manufacturers explain how state ZEV credits, EPA GHG multiplier credits, and NHTSA CAFE EV multiplier credits are accounted for in both ZEV and ICEV vehicle price.

i. State zero-emission vehicle credits.

"ZEV credits" are currency created by the State of California to provide supplemental subsidies to achieve their EV sales mandate. NMED, which adopts the same CARB program, must disclose the cost of this incremental subsidy that manufacturers of EVs require to entice buyers to meet state EV sales mandates. If buyers wanted EVs, the ZEV credit price would be $0, but California and other states explicitly decided to not collect this data from automakers, so the public has no information about the costs of this scheme. NMED must disclose who is paying the costs of the ZEV credits. Will New Mexico gasoline and diesel vehicle buyers cover the costs of ZEV credits for EV sales in the state through cross-subsidization, *i.e.*, will the MSRP of a gasoline pickup truck in New Mexico be higher than the MSRP of a gasoline pickup truck in a state without an EV sales mandate and ACC II? If so, by how much? Or will nationwide gasoline and diesel vehicle buyers cover these costs? If so, under what authority will New Mexico impose these costs on consumers nationwide? How much do these costs increase the price of gasoline and diesel vehicles? Also, if state EV sales mandates increase and battery minerals become scarcer, the value of ZEV credits are certain to increase significantly; however, NMED does not identify this risk or consider these costs. For example, one analyst (Joshua Linn) estimated the value of ZEV credits at $3,236 per credit.[88] Under California's rule, ZEV credits are awarded

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[84] U.S. Bureau of Labor Statistics, Northeast Information Office, Average Energy Prices, Boston-Cambridge-Newton — April 2023. Available at https://www.bls.gov/regions/northeast/news-release/averageenergyprices_boston.htm#:~:text=Source%3A%20U.S.%20Bureau%20of%20Labor,of%2016.5%20cents%20per%20kWh.

[85] Aaron Pressman, "Inside the crazy, mixed-up world of electric-vehicle charger pricing," The Boston Globe, March 27, 2023. Available at https://www.boston.com/news/the-boston-globe/2023/03/27/electric-vehicle-charger-pricing/.

[86] *Id.*

[87] *Id.*

[88] *See* Joshua Linn, Balancing Equity and Effectiveness for Electric Vehicle Subsidies (Resources for the Future Jan. 2022) available at https://media.rff.org/documents/WP_22-7_January_2022.pdf (accessed August 8, 2023).

based on the size of the battery (*i.e.*, the bigger the vehicle, the bigger the subsidy) and a typical EV receives 3 or more ZEV credits. Using Linn's estimate, every EV sale mandated by the State of New Mexico will impose a hidden cost of approximately $10,000 on ICEV buyers.[89]

ii. EPA GHG "multiplier" credits for EVs.

These credits give an extra manufacturing incentive to EV makers to meet EPA's GHG standards, despite EPA having no authority to do so, and are not based on any real-world avoided emissions. NMED does not estimate the costs of this subsidy to the extent that its proposal increases EV sales. Similarly, NMED does not consider that if EPA's GHG multiplier credits are determined to be unlawful and/or rescinded by regulation, the value of the aforementioned ZEV credits must necessarily increase to offset them. NMED should provide an estimate of the costs, which will be borne by purchasers of ICEVs.

iii. Corporate Average Fuel Economy (CAFE) "multiplier" credits.

Automakers and NHTSA are applying a long-expired incentive originally created by the Alternative Motor Fuels Act of 1988 to spur the commercial availability of alternative motor fuel vehicles (fueled with ethanol, methanol, or natural gas). This treatment allowed automakers to divide the gallon of gasoline equivalent for alternative fuel vehicles by 0.15, effectively producing a 6.67 multiplier of fuel economy credits. The Energy Policy Act of 1992 expanded the covered fuels to "alternative fuels," to also include LPG, hydrogen, coal-derived liquid fuels, other non-alcohol biofuels, and electricity. While this provision expired in either 1994 or 2004, depending upon one's interpretation, NHTSA continues to apply it to EVs.[90] In other words, EVs have been receiving credit for at least 667% of the real-world fuel economy they achieve on the road and EV manufacturers have been selling these credits to manufacturers of gasoline and diesel vehicles.[91] A NHTSA presentation suggests that its EV multiplier credits alone subsidize each

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[89] This estimate is currently spread across roughly 19 gasoline car buyers for every 1 EV buyer (assuming BEVs are 5% market share of new sales); however, as EV mandates like New Mexico's increase and the gasoline and diesel vehicle buyer pool shrinks, these costs will compound at an increasing rate.

[90] *See* National Highway Traffic Safety Administration, "Alternative Fuels in CAFE Rulemaking," presentation to SAE International (2015), available at https://www.nhtsa.gov/sites/nhtsa.gov/files/2015sae-powell-altfuels_cafe.pdf (Accessed August 8, 2023).

[91] A 2015 NHTSA presentation to SAE, and a NHTSA CAFE Credit Model Documentation report, show how credits are being calculated for EVs despite not generating any real-world fuel savings or real-world fuel economy improvement. See also https://www.nhtsa.gov/sites/nhtsa.gov/files/2015sae-powell-altfuels_cafe.pdf; https://www.nhtsa.gov/sites/nhtsa.gov/files/2022-04/Model-Documentation_CAFE- MY-2024-2026_v1-tag.pdf; https://one.nhtsa.gov/cafe_pic/home/ldreports/manufacturerPerformance. Per the NHTSA information above, since MY2017 standards were ~35mpg and MY2017 Tesla FE performance (with multipliers) was 518.7 mpg, and since Tesla sold ~46,979 MY2017 vehicles in the U.S., then Tesla in MY2017 generated 227 million excess credits. If the market-value of these credits is ~$5.50 per 0.1 mpg shortfall per vehicle under the MY2017 CAFE standard of ~35 mpg, then these credits were worth approximately $1.25 billion, or $26,600 per EV that Tesla sold. [Calculation of estimated value: Credits = (518.7 – 35) x 46979 x 10 x CAFE Penalty of $5.50 per 0.1 mpg shortfall per vehicle]. Tesla may have banked, traded, or sold these credits. Tesla MY2022 sales in the U.S. were 484,351 and the CAFE civil penalty is now $15 per 0.1 mpg shortfall per vehicle.

EV by more than $25,000, increasing the true average cost of every EV sold to over $90,000.[92] Per the NHTSA information above, MY2017 standards were ~35mpg and MY2017 Tesla (with multipliers) was 518.7 mpg. Since Tesla sold ~46,979 MY2017 vehicles in the U.S., then Tesla in MY2017 generated 227 million excess credits. If the market-value of these credits is ~$5.50 per 0.1 mpg shortfall per vehicle under the MY2017 CAFE standard of ~35 mpg, then these credits were worth approximately $1.25 billion, or $26,600 per EV that Tesla sold.[93] We note that the U.S. Department of Energy (DOE) recently proposed to eliminate this multiplier when calculating the petroleum equivalence factor for EVs.[94] NMED should provide an estimate of the incremental costs of these subsidy payments and of the effect of a potential decision by DOE to remove the 667% multiplier.

While cross-subsidization, tax credits, emissions trading, and other EV subsidies may hide the true costs of a ZEV mandate from consumers, NMED has a duty to quantify and present those costs that are attributable to ACC II. NMED's failure to do so is in direct violation of New Mexico administrative requirements to examine the technical practicability and economic reasonableness detailed in section IV A above and renders this proposal legally deficient.

e. Tax Revenue Implications.

California and New Mexico are two very different states. NMED must deploy meaningful analysis, absent in its administrative record, as to how ACC II in New Mexico will shrink the pool of gasoline and diesel vehicles paying taxes and the corresponding shortfall in tax receipts. For example, California's geographical size is 28 percent larger than New Mexico, and the population of California is 18 times the population of New Mexico.[95] Moreover, what percentage of New Mexico's population lives in multi-unit dwellings, which makes EV charging more difficult? What are the median salaries and cost of living in New Mexico? What proportion of the population has a low income? How do these statistics compare to California? What are current and projected electricity rates and how do differences in temperature impact EV range and purchase decisions? What EV charging infrastructure is available and what is needed to expand

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[92] *See* https://www.nhtsa.gov/sites/nhtsa.gov/files/2015sae-powellaltfuelscafe.pdf; https://www.nhtsa.gov/sites/nhtsa.gov/files/2022-04/Model-Documentation_CAFE-MY-2024-2026_v1-tag.pdf; https://one.nhtsa.gov/cafe_pic/home/ldreports/manufacturerPerformance.

[93] The calculation of estimated value: Credits = (518.7 – 35) x 46979 x 10 x CAFE Penalty of $5.50 per 0.1 mpg shortfall per vehicle]. Tesla may have banked, traded, or sold these credits. Tesla MY2022 sales in the U.S. were 484,351 and the CAFE civil penalty is now $15 per 0.1 mpg shortfall per vehicle.

[94] The Department of Energy has acknowledged that EV fuel economy is significantly overstated and has proposed certain modifications to the petroleum equivalency factor. See 88 Fed. Reg. 21,525 (April 11, 2023).

[95] Estimates as of July 1, 2022, U.S. Census Bureau, Quick Facts – New Mexico; California, available at https://www.census.gov/quickfacts/fact/table/NM,CA/LND110220 accessed October 27, 2023.

charging availability?[96] These factors affect EV adoption rate and, by extension, the impact on the state budget, which NMED ignored in adopting ACC II.[97]

EVs are heavier than comparable ICEVs, which means increased wear and tear on roadways. CARB and NMED fail to account for infrastructure impacts from increased operation of heavier ZEVs on the road including road and bridge deterioration and commensurate reduced funding for infrastructure from fuel tax collections. These excluded costs must be included in NMED's analysis—another example of the state's failure to address a major aspect of ACC II.

C. NMED's analysis of economic impacts is woefully inadequate.

NMED neglects to consider economic impacts to the public. We incorporate by reference our attached comments on CARB's ACC II proposal (Attachment A), AFPM's LDV comments (Attachment B), and AFPM's NHTSA comments (Attachment D). We further note that New Mexico's lack of analysis by itself makes NMED's proposal arbitrary and capricious. The state relies wholly on California's analysis. An evaluation of how adopting ACC II would harm or benefit the citizens of New Mexico cannot be properly conducted by a wholesale reliance on an analysis of impacts on another state, particularly states as different as New Mexico and California.

First and foremost, without a comparison of California's (CAISO) and New Mexico's (WECC) electrical grids and the relative reliability and status of repairs to these grids that are underway, NMED has not meaningfully assessed whether the assumptions underlying CARB's analysis of ACC II apply to its own proposed adoption of ACC II.[98] They do not, as the two states have very different electricity generation and distribution capabilities. Adopting an EV mandate will spike demand for electricity, placing further upward pressure on electric rates and threatening reliability.

Additionally, differences among New Mexico's climate and California's need to be considered. Colder weather negatively impacting charging efficiency and EV range, affecting both individual and systemic cost analyses.[99] EVs are less efficient in cold weather and extremely hot

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[96] *See* AFPM LDV Comments at 36-38 (discussion of EV charging infrastructure). As the study on discontinuance cited by EPA states, "[R]ange isn't correlated with discontinuance in PHEVs or ZEVs but with and access to charging[is]." Hardman, S., and Tal, G., Discontinuance Among California's Electric Vehicle Buyers: Why are Some Consumers Abandoning Electric Vehicles, April 21, 2021, Report for National Center for Sustainable Transportation at 26.

[97] *See Id.* at 30-34 (discussion of EV adoption rate).

[98] *See* AFPM LDV Comments at 34-36 and 56-58 for detailed discussions of challenges and costs associated with upgrading the electricity transmission grid.

[99] *See, e.g.*, Sean Tucker, Study: All EVs Lose Range in the Cold, Some More Than Others (Kelley Blue Book Dec. 29, 2022), available at https://www.kbb.com/car-news/evs-lose-range-in-the-cold/ accessed August 8, 2023) ("Range loss is a significant concern for electric vehicle (EV) owners. Refueling an EV takes longer, and public charging stations can be hard to find in many parts of the country. That scarcity requires EV owners to plan longer trips around recharging points — and to know they'll need to stop more frequently when the mercury drops."); Paul Shepard, Quantifying the Negative Impact of Charging EVs in Cold Temperatures (EEPower Aug. 8, 2018), available at https://eepower.com/news/quantifying- the-

weather.[100] According to New York Department of Transportations' National Electric Vehicle Infrastructure (NEVI) Plan dated August 2022:

> [v]ery cold temperatures (below 30 degrees Fahrenheit) have a significant effect on electric battery and charging performance. Charging is much slower in cold temperatures, and direct-current fast-charging (DCFC) facilities may only charge at a fraction of their rated speed in cold temperatures. Further, all-wheel drive vehicles are more popular in snowy climates. These vehicles have lower range than identical vehicles with front or rear wheel drive, which could trigger the need for additional charging.[101]

CARB neglected to adequately evaluate how climate impacts EV efficiency and electrical demand. NMED cannot rely on any evaluation performed by CARB given the vastly different climates of New Mexico and California. NMED must do the hard work to evaluate ACC II's application to New Mexico's climate, electrical grid, and charging infrastructure.

There is increasing evidence that regulations like ACC II, which mandate EV sales—along with the cross-subsidies from gasoline and diesel vehicle buyers—are leading manufacturers to abandon sales of the least expensive and higher fuel economy gasoline and diesel vehicles that do not receive similar subsidization. Cox Automotive found that "in December 2017, automobile makers produced 36 models priced at $25,000 or less. Five years later, they built just 10," pushing low-income buyers out of the new-car market and into the used-car market. Conversely, in December 2017 automobile manufacturers offered 61 models for sale with sticker prices of

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negative-impact-of-charging-evs-in-cold-temperatures/ accessed August 8, 2023, ("[A] new study on charging in cold temperatures suggests that industry and EV drivers still face charging challenges. The reason: cold temperatures impact the electrochemical reactions within the cell, and onboard battery management systems limit the charging rate to avoid damage to the battery. [R]esearchers at Idaho National Laboratory looked at data from a fleet of EV taxis in New York City and found that charging times increased as temperatures dropped.").

[100] AAA, Electric Vehicle Range Testing, AAA proprietary research into the effect of ambient temperature and HVAC use on driving range and MPGe (February 2019), https://www.aaa.com/AAA/common/AAR/files/AAA-Electric-Vehicle-Range-Testing-Report.pdf (ambient temperature and related HVAC use can result in moderate to significant reduction in EV range); Di Wu et al., Regional Heterogeneity in the Emissions Benefits of Electrified and Lightweighted Light-Duty Vehicles, Environ. Sci. Technol. 2019, 53, 18, 10560–10570 (July 23, 2019), https://pubs.acs.org/doi/full/10.1021/acs.est.9b00648 (model-based and empirical data-driven studies agree that ambient temperature impacts EV efficiency); Jon Witt, Winter & Cold Weather EV Range Loss in 7,000 Cars (Recurrent Dec. 12, 2022), available at https://www.recurrentauto.com/research/winter-ev-range-loss accessed August 8, 2023; see also 20 popular EVs tested in Norwegian winter conditions (Norwegian Automobile Fed'n Mar. 12, 2020, available at https://www.naf.no/elbil/aktuelt/elbiltest/ev-winter-range-test-2020/ Accessed August 8, 2023.

[101] New York Department of Transportation (NYDOT), New York State National Electric Vehicle Infrastructure Formula Program Plan, at 18 (Aug. 2022). Additionally, charging infrastructure reliability is an issue NMED must investigate. *See e.g.*, Julian Dnistran, InsideEvs (Feb. 2023) ("According to J.D. Power's Electric Vehicle Experience Public Charging Study, quoted by Automotive News, the number of failed charging attempts grew from 15 percent in the first quarter of 2021 to more than 21 percent by the third quarter of 2022. At worst, almost 2 in 5 visits to chargers – or 39% – were unsuccessful last year.").

$60,000 or higher and in December 2022, they offered 90.[102] Regulations like ACC I and ACC II are primary drivers of this trend toward eliminating affordable vehicles and NMED must account for these market impacts to lower-income car buyers.

Dramatic investments are required to expand the electrical grid and install adequate charging. Current office buildings, parking lots, apartment buildings, municipal buildings, and town centers will need to be retrofitted with adequate charging stations.

Finally, charging downtime and range limits will likely reduce vehicle operation time. Therefore, commercial enterprises, including small businesses, using light-duty vehicles will need to deploy more vehicles to provide the same level of service currently provided by ICEVs.

D. NMED fails to fully assess the environmental impacts of ACC II.

NMED claims ACC II will increase the number of ZEVs and reduce harmful emissions of pollutants and create health benefits.[103] NMED relies on California's analysis that calculates purported emissions benefits. NMED needs to perform a lifecycle assessment to compare the GHG emissions associated with manufacturing EVs and ICEVs. Mining critical minerals for batteries is an energy- and environmentally resource-intensive activity. Lithium, required for batteries, and copper, required to expand the electrical grid, are particularly vulnerable to water stress given their high-water usage.[104] And more than 50 percent of today's lithium and copper production is concentrated in areas with high water stress levels. Several major producing regions such as China, Africa, and Australia are also subject to extreme heat or flooding, which pose greater challenges in ensuring reliable and sustainable supplies. Strong focus on environmental best practices in this sector is needed to safeguard natural lands, biodiversity, and sustainable water use. Similarly, focus on ethical best practices is needed to protect Indigenous peoples' rights, and to provide better child labor protections. These challenges call for sustainable and socially responsible producers to lead the industry.

Absent a proper and thorough lifecycle assessment, NMED cannot assert that its proposal will result in reduced NOx, $PM_{2.5}$, and GHG emissions. This is because an all-EV mandate will significantly increase demand for electricity, requiring careful consideration of emissions resulting from generation of that electricity in order to determine the magnitude of overall changes in emissions. Moreover, the composition of the energy mix that will be used to generate additional electricity is unclear.

A full-scale transition to ZEVs will require continued careful coordination between state and federal leadership, utilities, energy regulators and the public to protect against increases in

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[102] *See* Sean Tucker, Are we witnessing the demise of the affordable car? Automobile makers have all but abandoned the budget market (MarketWatch Feb. 28, 2023), available at https://www.marketwatch.com/story/are-we-witnessing-the-demise-of-the-affordable-car-automakers-have-all-but-abandoned-the-budget-market-a68862f0 Accessed August 8, 2023.
[103] State of New Mexico Environmental Improvement Board, In the Matter of Proposed Amendments to 20.2.91 NMAC – New Motor Vehicle Emission Standards, No. EIB 23-56(R). Statement of Reasons at 7.
[104] *See* EIA 2022 Report.

"upstream" emissions at power plants that threaten the health of other communities far from roadways.[105]

New Mexico is part of a regional power market, one which has a high concentration of coal and gas-fired power plants that supply most of the electricity to every customer in New Mexico.[106] Therefore, the in-state power mix is not necessarily representative of the GHG-related emissions associated with in- state power consumption. Without a true, robust LCA such as that conducted by Ramboll on CARB's ACC II proposal (and attached hereto), NMED cannot demonstrate that its proposal will achieve its stated objectives even directionally, let alone in terms of magnitude.

NMED did not fully consider the impact of the rule on fleet turnover. Higher purchase price of new ZEVs will keep older, higher-emitting, cars and trucks on the road longer and new ZEVs will increase particulate matter (PM) emissions through tire and road wear. NMED ignored the fleet turnover benefit that would result from replacing older ICEVs with new, more efficient ICEVs.

The average EV weighs more than the average ICEV, resulting in increased tire wear and road dust PM emissions. NMED and CARB ignored the National Emissions Inventory, which shows that roadway dust contributes more $PM_{2.5}$ emissions than tailpipe emissions.[107] There are also roadway weight restrictions, which could require a greater number of ZEVs to move the same tonnage of cargo, thus increasing the number of vehicles needed to haul the same amount of freight, vehicle miles traveled, and resulting PM emissions.

Finally, CARB and NMED's "environmental analysis" ignores the impacts of electric battery disposal related issues, including limited recycling. In fact, recycling ZEV batteries to recover high-value metals has not been proven to a commercial scale.[108] The majority of analysts are aligned that recycling will not become an integral supplier of raw materials until the 2030s, and at that point, recycling only will provide approximately 20 percent of demand.[109] In fact, unlike ICEVs, EPA recently stated that ZEV batteries may need to be handled as hazardous waste, further driving up the cost of such recycling efforts.[110] NMED and CARB must, therefore, conduct a full LCA to compare all environmental impacts to reasonably conclude that ACC II will decrease environmental impacts rather than merely shift them.

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[105] *See* AFPM LDV Comments at 42-48 for a complete discussion of how *de facto* EV mandates overstate environmental benefits.
[106] U.S. Department of Energy, State of New Mexico Energy Sector Risk Profile. Available at https://www.energy.gov/sites/prod/files/2016/09/f33/NM_Energy%20Sector%20Risk%20Profile.pdf accessed October 16, 2023.
[107] EPA, "2020 National Emissions Inventory (NEI) Data," available at https://www.epa.gov/air-emissions-inventories/2020-national-emissions-inventory-nei-data. Roadway dust emissions, including particles from tire wear, are correlated with vehicle weight, so increases in fleet average vehicle weight would be expected to increase roadway dust $PM_{2.5}$ emissions.
[108] *See* AFPM LDV Comments at 47-48 for a detailed discussion of EV battery end-of-life challenges.
[109] Benchmark Minerals Intelligence, "Battery production scrap to be main source of recyclable material this decade" (Sept. 5, 2022) at n. 105, available at https://source.benchmarkminerals.com/article/battery-production-scrap-to-be-main-source-of-recyclable-material-this-decade.
[110] Letter from Carolyn Hoskinson, Director, EPA Office of Resource Conservation and Recovery, "Lithium Battery Recycling Regulatory Status and Frequently Asked Questions," (May 24, 2023).

V. California's struggles present a cautionary tale for New Mexico.

California policymaking is hardly an unqualified success story. Its policies—like the EV sales mandates—have had major inflationary impacts on gasoline and energy prices, as well as negative impacts on jobs in certain industries that are directly related to traditional fuels and vehicles.[111] While often lauded as a laboratory for GHG emission reduction policies, California's transportation fuel prices are now the highest in the nation, averaging approximately $5.33 per gallon of gasoline.[112] According to a 2021 Report from the California Public Utilities Commission, "it is already cheaper to fuel a conventional ICE vehicle than it is to charge an EV" in the San Diego Gas & Electric Co. service area.[113] The California Energy Commission projects that both commercial and residential electricity prices will continue to rise, reaching over $8/gasoline gallon equivalent (GGE) by 2026 for the residential sector and nearly $7/GGE for the commercial sector.[114] New Mexico should carefully consider the criticisms of California's policies, such as those leveled by The Two Hundred for Homeownership, which point out the disproportionate impacts to working and minority communities.[115]

As California has faced rolling blackouts and historic energy prices, Governor Newsom, in his May 2022 state budget proposal, pivoted to the use of traditional fuel infrastructure to ensure system reliability to protect against outages.[116]

Moreover, unworkable EV sales mandates put New Mexico at risk of missing the real carbon intensity reductions available through incentivizing low-carbon liquid fuels and by encouraging the development of emerging carbon removal technologies.

VI. Conclusion

Federal law preempts NMED from adopting ACC II in multiple respects. Separate and apart from this issue, even if NMED had the authority to adopt ACC II, NMED must conduct a meaningful public notice and comment process for its complex proposal before doing so. There are significant technical, economic, and legal facts and analysis that NMED has ignored or inadequately addressed in its process, rendering its proposal arbitrary and capricious. NMED should address these procedural and analytical deficiencies by conducting technical working groups to foster stakeholder participation in scenario development and assessment.

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[111] California Legislative Analyst's Office, Assessing California's Climate Policies – An Overview (Dec. 21, 2018).
[112] AAA, California Average Gas Prices – Current Avg., available at https://gasprices.aaa.com/?state=CA (last visited October 27, 2023).
[113] CPUC, Utility Costs and Affordability of the Grid of the Future: An Evaluation of Electric Costs, Rates, and Equity issues Pursuant to P.U. Code § 913.1, at 116-117 (May 2021), available at https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/office-of-governmental-affairs-division/reports/2021/senate-bill-695-report-2021-and-en-banc-whitepaper_final_04302021.pdf accessed August 8, 2023.
[114] CEC, "Presentation - Transportation Energy Demand Forecast," 21-IEPR-03 (Dec. 14, 2021).
[115] *See* Plaintiffs' Complaint, The Two Hundred for Homeownership, et al. v. California Air Resources Board, et al., No. 1:22-CV-01474 (E.D. Cal. filed Nov. 14, 2022).
[116] *See* https://ebudget.ca.gov/2022-23/pdf/Revised/BudgetSummary/ClimateChange.pdf. Accessed August 28, 2023.

Multi-technology pathways can help the state achieve faster and more certain emission reductions while expanding ways to reduce greenhouse gas emissions. NMED should evaluate and propose performance standards as an alternative to its proposed adoption of ACC II and its EV mandate. If NMED did a proper life cycle analysis of the emissions of an EV compared to an ICEV, it would realize that the total emissions reductions from an EV are much lower than assumed. Similarly, if NMED did a proper cost analysis, it would realize that the costs of EV ownership are masked by credits and cross subsidization strategies. Correcting these two major deficiencies in NMED's analyses would reveal to policy makers that EVs are among the most expensive carbon reduction tools available. New Mexico families that depend upon affordable, reliable transportation, particularly lower-income households, are negatively impacted with higher costs, reduced energy security, and fewer vehicle choices to meet their needs.

Thank you for the consideration of these comments.

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American Fuels & Petrochemical Manufacturers

Attachments