November 14, 2023

Via Public Comment Form (https://nmed.commentinput.com/?id=TuMmsArBj)

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

RE: Advanced Clean Cars and Advanced Clean Trucks Rules (EIB 23-56 (R)) – Public Comment

Dear Administrator:

HF Sinclair Corporation ("HF Sinclair") submits these comments opposing the New Mexico Environment Department's ("NMED") proposed Advanced Clean Cars and Advanced Clean Trucks Rules directing automotive manufactures to increase "zero-emission" vehicle ("ZEV")[1] sales beginning with model year ("MY") 2027 (hereinafter, Proposed Rule"[2]). HF Sinclair is a diversified, innovative energy company that manufactures and sells products such as gasoline, diesel fuel, jet fuel, renewable diesel, and specialty chemicals, among others. Our operations include refineries across the U.S. in New Mexico, Kansas, Oklahoma, Utah, Washington, and Wyoming and we market refined products principally in the Southwest U.S. and Rocky Mountains, extending into the Pacific Northwest and in the neighboring Plains states.

HF Sinclair is proud to have operated within the state of New Mexico for nearly 50 years, and employ approximately 600 dedicated individuals in Bernalillo, Eddy and Lea Counties. The HF Sinclair Navajo Refinery can process about 100,000 barrels of crude oil per day – which is primarily sourced from New Mexico crude fields – and manufactures enough diesel fuel to meet the state's daily demand. Our petroleum products are sold on a wholesale basis and delivered to several markets across the state, as well as in Texas and Arizona. Furthermore, HF Sinclair is also the largest asphalt supplier, which is a product of the petroleum refining process, in New Mexico. It is worth noting HF Sinclair's Navajo Refinery is the last refinery left in New Mexico.

HF Sinclair fully understands that the United States is the midst of an energy transition. To that end, HF Sinclair has invested $800–$900 million in low-carbon fuel production, which

[1] NMED defines "zero-emission vehicle" in the same manner as 13 Cal. Code Regs. 1962.2(a): "vehicles that produce zero exhaust emissions of any criteria pollutant (or precursor pollutant) or greenhouse gas." Proposed Rule, 20.2.91.7.HH.
[2] XXXIV NM Reg. 17, "New Mexico Environmental Improvement Board Notice of Rulemaking Hearing to Consider EIB 23-56 (R) - In the Matter of Proposed Amendments to 20.2.91 NMAC – New Motor Vehicle Emissions Standards" (Sept. 12, 2023) (hereinafter "Notice of Hearing on Proposed Rule").

includes construction of two renewable diesel units and one renewable feedstock pretreatment unit, and purchase of an existing renewable diesel unit from Sinclair Oil, all of which make HF Sinclair one of the largest producers of renewable diesel in the United States. In fact, a significant amount of the investment outlined above is in New Mexico and makes HF Sinclair the largest renewable fuels producer in the Southwest.

HF Sinclair believes that such government policies must be technology-neutral and not manipulate the energy market by picking winners and losers. NMED[3] cannot and should not promulgate inequitable regulations that mandate compliance through a single technology pathway. Consumer choice must be allowed in order to drive vehicle manufacturers, or original equipment manufacturers ("OEMs"), to provide a fleet mix that meets federal emission limits sufficient to improve air quality in a reliable and efficient manner.

I. Executive Summary

NMED should abandon its proposal to promulgate regulations mandating the electrification of light-duty motor vehicles as it is unlawful and impractical. The Clean Air Act ("CAA" or "the Act") and the Energy Policy Conservation Act of 1975 ("EPCA") prevent and preempt New Mexico from setting standards regulating emissions and fuel economy different from those adopted at the federal level. Though NMED may believe it can avoid preemption issues by relying on a waiver granted by the federal Environmental Protection Agency ("EPA") to California, such waiver is unlawful and not a basis for the regulations NMED proposes to enact. Finally, NMED's Proposed Rule would severely constrain consumer choice, ignore the realities of New Mexico's automotive landscape, push undue costs onto consumers, and fail to properly consider the role of alternative fuels in a technology-neutral approach.

II. The Proposed Rule Is Unlawful Because It Is Preempted under the Clean Air Act

The CAA expressly preempts NMED's Proposed Rule. While the CAA permits EPA to grant a waiver to California from the preemptive effect of the CAA and allows other states to adopt California's laws, no valid waiver for NMED's Proposed Rule applies here.[4] Instead, the Proposed Rule relies on EPA's unlawful reinstatement of a waiver in 2021 for California's Advanced Clean Cars program. This waiver—which broadly addresses greenhouse gases ("GHGs") as opposed to localized, unique pollution concerns—is currently being challenged before the Court of Appeals

[3] We understand that NMED petitioned for this rulemaking and the ultimate decision will be made by the New Mexico Environmental Improvement Board ("EIB"). For purposes of these comments, we will refer to NMED as inclusive of both entities.

[4] *See* 42 U.S.C. § 7507 (authorizing states meeting certain criteria to adopt motor vehicle standards in nonattainment areas if such standards are identical to California standards for which a waiver has been granted and the standards have been adopted at least two years before commencement of applicability to a given model year).

for the District of Columbia Circuit.[5] The waiver is legally vulnerable in light of EPA's vacillating position on whether the waiver was validly issued,[6] and because EPA's basis for re-issuing the California waiver in 2021 was unlawful, as further detailed by the Petitioners' briefs before the court in *State of Ohio et al. v. EPA*, which HF Sinclair adopts for purposes of these comments as if stated fully herein.[7]

To briefly summarize, Title II of the CAA authorizes the federal government to regulate emissions from new motor vehicles.[8] To ensure effective and consistent control by the federal government, section 209(a) of the CAA specifically preempts states' independent adoption of "any standard relating to" new motor vehicle emissions.[9] The purpose of preemption is to prevent a "patchwork quilt" of state vehicle emissions standards that would frustrate and impede the ability of automakers to build a uniform vehicle for sales into the U.S. market. Congress created only a narrow exception to this rule for the state of California to adopt its own emission standards, but only where necessary to "meet compelling and extraordinary conditions."[10] This narrow waiver, if granted, empowers California, and only California, to resolve "peculiar local conditions" like the persistent smog problem California historically faced.[11] But this provision—which EPA relied upon in reinstating California's ACC waiver—is unconstitutional and contrary to law, violating sections 706(2)(A)–(B) of the Administrative Procedure Act ("APA").

First, section 209(b) of the CAA, which authorizes the EPA to waive this preemption provision for certain standards proposed by the state of California, is unconstitutional because it violates the equal-sovereignty doctrine by allowing California, and only California, to exercise additional powers over other states.[12] Congress is not authorized to treat a state within the union

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[5] *See* Petition for Review, *State of Ohio, et al. v. EPA, et al.*, No. 22-1081, Doc. 1946617 (D.C. Cir. May 12, 2022).
[6] 84 Fed. Reg. 51,310 (Sept. 27, 2019); 74 Fed. Reg. 12,156 (Mar. 6, 2008);
[7] *See, e.g.*, Corrected Proof Brief of Petitioners, *State of Ohio, et al. v. EPA, et al.*, No. 22-1081, Doc. 1971738 (D.C. Cir. Nov. 2, 2022).
[8] 42 U.S.C. § 7410.
[9] 42 U.S.C. § 7543(a); *Motor Equip. Mfrs. Ass'n, Inc. v. EPA*, 627 F.2d 1095, 1109 (D.C. Cir. 1979) (explaining Title II works to prevent an "anarchic patchwork of federal and state regulatory programs.").
[10] 42 U.S.C. 7543(b)(1)(B).
[11] S. Rep. No. 90-403, 33 (1967); *see also* 49 Fed. Reg. 18,887 18,890 (May 3, 1984); H.R. Rep. No. 90-728, 22 (1967) (discussing grant where California faced "unique problems" with criteria pollutants such as ground-level ozone and fine particulate matter).
[12] *See, e.g.*, *Pollard v. Hagan*, 44 U.S. 212, 229 (1845); *Stearns v. Minnesota*, 179 U.S. 22, 245 (1900) ("a State admitted into the Union enters therein in full equality with all the others, and such equality may forbid any agreement or compact limiting or qualifying political rights and obligations.").

on terms more or less favorable than others.[13] Such reordering of power among the states, as well as between the states and the federal government, contradicts both the Constitution's separation of powers and the Constitution's conferral of power upon Congress to regulate individuals as opposed to states.[14] Because Congress must treat each state equally under the law—or at least adequately justify any unequal treatment[15]—section 209(b)(1) is unlawful. Section 209(b)(1) allows California to exercise authority over an area of law that is exclusively within the Federal government's control and that was expressly taken away from every other state—starkly violating the equal-sovereignty doctrine amongst the states as well as dual-sovereignty as between states and the Federal government.

Second, even if section 209(b) of the CAA was constitutional on its face, it remains unconstitutional as applied here because *no other state* can rely on section 209(b) to resolve any unique and localized concerns it may face in addressing particularly problematic air pollution. Further, even if EPA had discretion in determining whether to grant such a waiver to *all* states, section 209(b) still requires EPA to deny a petition where the statutory criteria of 209(b) are not met. Here, California's waiver is not for any unique and localized concern as originally contemplated by Congress. Rather, the unlawful waiver authorizes California to broadly regulate GHGs as part of its efforts to address impacts to climate change—a global, rather than local (or even state-specific) concern.[16] That such a waiver is intended for California to regulate a non-local issue is further illustrated by NMED's reliance on the waiver itself in attempting to promulgate its own similar Proposed Rule, as part of a state effort to "address [GHG] emissions in keeping with Governor Lujan Grisham's Executive Order 2019-003 On Addressing Climate Change and Energy Waste Prevention."[17]

Third, even if the waiver can survive a constitutional challenge, it fails the requisite substantive standards. A single exemption provision allows EPA to issue a preemption waiver to California under CAA § 209(b)(1) to establish its own motor vehicle emission standards if certain conditions are met.[18] California may secure a preemption waiver if it demonstrates that departure from the national uniform standard will be "at least as protective of public health and welfare as

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[13] *See Or. Ex rel. State Land Bd. V. Corvallis Sand & Gravel Co.*, 429 U.S. 363, 378 (1977); *United States v. Texas*, 339 U.S. 707, 717 (1950).
[14] *See New York v. United States*, 505 U.S. 144, 166 (1992).
[15] *See Shelby Cnty v. Holder*, 570 U.S. 529, 540–42 (2013).
[16] *See City of New York v. Chevron Corp.*, 993 F.3d 81, 88 (2d Cir. 2021).
[17] Notice of Hearing on Proposed Rule, *supra* n. 2; *see also* NMED, EIB 23-56 (R), Statement of Reasons (Jul. 7, 2023) *available at* https://www.env.nm.gov/opf/wp-content/uploads/sites/13/2023/07/2023-07-07-EIB-23-56-Attachment-1-Statement-of-Reasons.pdf
[18] And if EPA issues a waiver, the Clean Air Act allows other states to adopt California's standards. 42 U.S.C. § 7507.

applicable Federal standards."[19] EPA, however, shall deny a waiver application if it makes one or more of three findings:

1) California's determination regarding its state standards is arbitrary and capricious;
2) California does not need its standards to meet "compelling and extraordinary conditions;" or
3) California standards and accompanying enforcement procedures are not consistent with 42 U.S.C. § 7521(a).[20]

While EPA initially granted California a waiver in 2013 for its Advanced Clean Cars program, it later revoked the waiver, finding that California failed to demonstrate that it has compelling and extraordinary conditions unique to the state to regulate GHG emissions.[21] EPA also concluded that the California program was preempted by EPCA.[22] EPA's reasoning from its 2019 waiver recission remains valid and demonstrates that recent reissuance of the waiver, which NMED would rely upon here, was unlawful.

Fourth, EPA failed to consider the preemptive impact of EPCA and that issuance of the waiver is beyond the authority granted to it by the CAA. As discussed below, any state regulation relating to "fuel economy" standards is preempted on its face by EPCA. And EPA's waiver to California ultimately authorizes California to regulate fuel economy under the guise of GHG emissions standards given the direct relationship between these two motor vehicle variables. But EPA failed to even consider the preemptive nature of EPCA on its waiver for these California programs—despite commenters raising the conflict—marking yet another reason for the reviewing court to conclude EPA's reinstatement was unlawful and arbitrary under the APA.[23]

In sum, NMED's Proposed Rule lacks a valid legal basis. Consequently, any finalized standards would become immediately ineffective in light of federal preemption provisions and/or a court determination that the California waiver is illegal and/or preempted. Thus, NMED should refrain from promulgating the Proposed Rule.

III. EPCA Precludes States From Setting Fuel Economy Standards that Differ from Federal Standards

Regardless of the legality of California's waiver, NMED's Proposed Rule is preempted by the EPCA because it imposes fuel-economy standards for new motor vehicles. EPCA requires the

[19] 42 U.S.C. § 7543(b)(1).
[20] 42 U.S.C. § 7543(b)(1)(A)-(C).
[21] 84 Fed. Reg. 51,310 (Sept. 27, 2019).
[22] *Id.*
[23] 5 U.S.C. § 706(2)(A).

Department of Transportation's National Highway Traffic Safety Administration ("NHTSA")—not the EPA or the state of California—to set fuel-economy standards for new vehicles, applicable nationwide.[24] EPCA expressly preempts state regulation that is "related to fuel economy":

> When an average fuel economy standard is prescribed …, a State or a political subdivision of a State may not adopt or enforce a law or regulation related to fuel economy standards or average fuel economy standards for automobiles covered by an average fuel economy standard.[25]

The term "related to" indicates that Congress intended the broadest possible preemptive effect over state law in the field of fuel economy regulation. A State regulation need not directly regulate fuel economy, or directly conflict with NHTSA's own fuel economy regulations, to trigger the "related to" preemption provision.[26]

Unlike the CAA, as described above, there is no exception to this preemption provision. Thus, fuel economy standards are prescribed exclusively by NHTSA. And reducing traditional fuel consumption is the most direct means of reducing GHG emissions. Because of NHTSA's exclusive control over fuel economy and the relationship between GHG emissions and fuel economy,[27] NHTSA and the EPA have historically coordinated regulatory efforts to impose GHG emission standards for new motor vehicles, explaining this close relationship:

> [T]he relationship between improving fuel economy and reducing CO_2 tailpipe emissions is a very direct and close one. The amount of those CO_2 emissions is essentially constant per gallon combusted of a given type of fuel. Thus, the more fuel efficient a vehicle is, the less fuel it burns to travel a given distance. The less fuel it burns, the less CO_2 it emits in traveling that distance.[28]

The Proposed Rule, like California's ACC programs, attempts to reduce GHG emissions in exactly this manner—by mandating ZEVs, which effectively consume traditional fuel at a much lower rate than internal combustion engine ("ICE") vehicles, if they consume traditional fuel at all. The Proposed Rule thus attempts to regulate in an area "related to fuel economy standards." This is not a new interpretation. In 2006, NHTSA finalized a standards for corporate-average-fuel

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[24] 42 U.S.C. § 6201 *et seq.*

[25] 49 U.S.C. § 32919(a).

[26] *See*, e.g., *Metro. Taxicab Bd. of Trade v. City of New York*, 633 F. Supp. 2d 83, 85, 101-02 (S.D.N.Y. 2009) (finding city ordinance effectively mandating taxi owners to shift fleets to hybrids to be expressly preempted), aff'd on modified grounds by *Metro Taxicab Bd. of Trade v. City of New York*, 615 F.3d 152 (2d Cir. 2010).

[27] For example, compliance with fuel economy standards is measured, in part, by carbon dioxide emission rates. *See* 83 Fed. Reg. 42,986, 43,234 (Aug. 24, 2018).

[28] 75 Fed. Reg. 25,324, 25,327 (May 7, 2010).

economy and expressly concluded that a "state requirement limiting CO2 emissions" would be preempted "because it [would have] the direct effect of regulating fuel consumption."[29]

Even if the "related to" language were not plain, and Congress's intent to preempt the field were not evident, the Proposed Rule actually conflicts with EPCA by imposing an obstacle to Congressional goals under that statute, creating a separate rationale to find it preempted.[30] When it passed EPCA, Congress sought to improve fuel economy, but not at the expense of consumer choice and OEM compliance flexibility. The Proposed Rule undercuts this flexibility by mandating vehicles that OEMs must sell and limiting what consumers may purchase. This is a direct affront to federal standards. In its Corporate Average Fuel Economy standards, NHTSA strikes a careful balance between maximizing fuel economy and other congressional aims. New Mexico's approach mandates a particular suite of technologies—electric battery and fuel-cell—while stifling the development of other technologies that might accomplish the same energy goals at lesser cost or lesser harm to the environment. Further, it mandates the use of battery-driven vehicles and creates a significant dependence on foreign supplies of various metals and other materials. This is the very type of over-dependence on foreign markets that EPCA was created to prevent.

Because EPCA preempts such state regulation, NMED lacks authority to impose the Proposed Rule, or any rule effectively regulating fuel economy by mandating zero- or low-emissions vehicle types.

IV. An Electric Vehicle Mandate is Improper for New Mexico Drivers and Ignores Consumer Preference for Trucks and SUVs

Regardless of whether a rule mandating any technology for GHG emissions reductions is inappropriate or unauthorized, NMED must at least consider the reality of consumer needs specific to New Mexico as well as the ability of the ZEV market to meet those needs—and the timeframe in which the ZEV market could reasonably meet those needs—in any proposed rule. One obvious oversight of the Proposed Rule is how a ZEV mandate will affect New Mexico's automotive market—one which is disproportionately dominated by conventional, or ICE SUVs. Light trucks and SUVs accounted for roughly 60 percent of vehicles in the state.[31] This is unsurprising given New Mexico's diverse terrain where trucks and SUVs, particularly those with all-wheel drive, are a necessity for consumers. And given the state of New Mexico's automotive outlook, it is difficult to ascertain how this market share can increase nearly exponentially over the next few years. Today, SUVs and light trucks account for about half of the ZEV offerings domestically, but only

[29] 71 Fed. Reg. 17,566 17,654 (Apr. 6, 2006); *see also* 83 Fed. Reg. 42,986, 42,999 (Aug. 24, 2018).

[30] *See, e.g.*, *Crosby v. Nat'l Foreign Trade Council*, 530 U.S. 363, 372-73 (2000) (state laws that stand as an obstacle to accomplishing or executing the purposes and objectives of Congress is preempted).

[31] KRQE NEWS, "SUVs most popular vehicle in New Mexico" (Aug. 2, 2021) *available at* https://www.krqe.com/news/business/suvs-most-popular-vehicle-in-new-mexico/.

0.15% of all vehicles in the State are electric, signaling a significant shortfall for New Mexico consumers.[32]

New Mexico's mountainous terrain, extreme climate in certain regions, and days of sunlight comprise just a few of the key factors limiting the drivability, and thus adoption rate, of ZEVs given a ZEV's driving range. Hilly or mountainous terrain and rough or uneven surfaces can cause a significant reduction in range for ZEVs due to the increased energy required to climb steeper inclines or maintain speed and traction.[33] In fact, ZEVs can lose anywhere from 10%–36% of their range in moderately colder temperatures—and it gets "serious when temperatures drop to the 10°–20° F range."[34] And ZEVs similarly drop by 15% when temperatures start to go above 95° F.[35] Although New Mexico, on average, has relatively moderate temperatures, various mountain regions experience temperatures below 30–40° F and the majority of regions experience temperatures above 80° F, even exceeding 100° F during the summer months—exacerbating the effects of climate on ZEV adoption within the State.[36] The official U.S. government source for fuel economy data concluded that the fuel economy for hybrids and EVs can drop as much as 35% and 39%, respectively. And for those regions experiencing snowy conditions, or just uneven terrain, an EV also typically has a lower center of gravity, failing to provide sufficient clearance, "which can be precarious around higher snowdrifts and unplowed roads."[37]

This deficiency makes long-distance travel more challenging, especially if a vehicle's operator is not mindful or aware of the reality of this "expected decrease in productivity, the

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[32] IEA, "Trend in electric light-duty vehicles" (2023) *available at* https://www.iea.org/reports/global-ev-outlook-2023/trends-in-electric-light-duty-vehicles; KRQE, "See how many electric vehicles are registered in New Mexico" (May 26, 2022) *available at* https://www.krqe.com/news/new-mexico/see-how-many-electric-vehicles-are-registered-in-new-mexico/.

[33] ENERGY5, "The Role of Climate and Terrain in Determining Electric Car Range" (Sept. 18, 2023) *available at* https://energy5.com/the-role-of-climate-and-terrain-in-determining-electric-car-range.

[34] Tom Krisher and Mark Thiessen, AP NEWS, "Global race to boost electric vehicle range in cold weather" (Mar. 4, 2023) *available at* https://apnews.com/article/electric-vehicles-cold-weather-battery-ev-6d86b7aa19e233d5dcc4d2c9abb193ed.

[35] Carolina Christie, HERE, "How does hot weather affect electric cars?" (Jul. 5, 2023) *available at* https://www.here.com/learn/blog/ev-range-in-hot-weather#:~:text=Lithium%2Dion%20and%20lithium%2Diron,go%20above%2095%20degrees%20Fahrenheit.

[36] New Mexico State University, "Climate in New Mexico" *available at* https://weather.nmsu.edu/climate/about/#:~:text=The%20average%20range%20between%20daily,higher%20elevations%20of%20the%20north.

[37] I.S. Peterson, THE MAVERICK OBSERVER, "EVs are Big in Colorado; But Are They Really?" (Jul. 25, 2022) *available at* https://themaverickobserver.com/evs-are-big-in-colorado-but-are-they-really/.

weather conditions and their vehicle's current charge status."[38] As the fifth-largest state in the U.S., long-distance travel and effective range is incredibly important. Finally, parking and storing a ZEV in direct sunlight and/or heat can also break down one of the protective layers surrounding a ZEV battery and lead to faster battery degradation,[39] another concern for New Mexico drivers who experience some of the highest number of days with clear skies and direct sunlight—another factor which may give potential EV users pause.[40] New Mexico consumers have said it best: "Range anxiety is very real."[41]

And resolutions for increased charging infrastructure cannot assuage such pause until there is real progress in increasing availability to such infrastructure. Given the size of New Mexico, sufficient charging infrastructure to sustain long-distance driving or to combat decreased range issues is needed within various, often rural, areas of the state—including those along interstate corridors connected to Texas, where charging infrastructure is lacking. Currently, the State's rural regions have between zero and one charging ports to serve the entire area.[42] Thus, consumer choice will remain a limiting factor in ZEV adoption throughout the State.

V. The Proposed Rule Imposes an Unrealistic ZEV Mandate

a. NMED's Proposed Timeline is Not Technologically Feasible

Regardless of whether NMED is authorized to act pursuant to either the CAA or EPCA, the CAA nevertheless requires that any motor vehicle standards are issued with sufficient lead time "to permit the development and application of the requisite technology, given appropriate consideration to the cost of compliance within such period."[43] For NMED's aggressive proposal mandating ZEVs within the state starting by model year 2027, the "requisite technology" not only includes manufacturing the vehicles themselves but also the underlying charging infrastructure necessary to power these vehicles. But New Mexico does not have sufficient charging stations, utilities, and other infrastructure needed to support the deployment of an electrified fleet within the Proposed Rule's contemplated timeline. Without the ability to charge the ZEVs NMED will be requiring OEMs to produce, the Proposed Rule is nonsensical. Furthermore, recent studies of

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[38] *Id.*
[39] CHASE, "How does hot weather affect EV range: Tips for reducing the risk" (2023) *available at* https://www.chase.com/personal/auto/education/maintenance/how-does-hot-weather-affect-ev-range.
[40] *See, e.g.*, New Mexico State University, *supra* n. 37.
[41] Robert Nott, SANTA FE NEW MEXICAN, "New Mexico ranks well for electric car charging ports, but rural access lacking" (Jun. 3, 2023) *available at* https://www.santafenewmexican.com/news/local_news/new-mexico-ranks-well-for-electric-car-charging-ports-but-rural-access-lacking/article_13174470-fef1-11ed-b1bd-4370e9974d88.html.
[42] *Id.*
[43] 42 U.S.C. § 7521(a)(2).

public charging stations concluded that 39% of charging attempts were unsuccessful, meaning the data on existing charging infrastructure is likely overly conservative.[44]

Currently, for example, to meet proposed federal standards that are currently less stringent than those likely to be included in the Proposed Rule, New Mexico has an insufficient number of chargers. To meet the U.S. goals of even 20 million ZEVs by 2030 and shift the State's ICE vehicles to EVs requires a $2.8–$4.7 billion in generation, $1.4–$2.3 billion in transmission and distribution, and $2.8–$4.7 billion in charging infrastructure—totaling an investment of $7.0–$11.7 billion.[45] And the costs associated with building out this infrastructure will likely be offset by rate-payers already forced to purchase the higher-priced ZEV: "with the average household using 9,175 kWh/yr, and ignoring any rate of return for the utilities, the cost to upgrade the state's electrical grid could result in a 1.3 to 2.1 cent increase per kWh which equates to $117 to $195 per year."[46] These concerns are further compounded when considering whether the electric grid itself can meet the increased electricity demand that accompanies the Proposed Rule. As highlighted by the North American Electric Reliability Corporation ("NERC"), certain high risk areas do not, today, meet resource adequacy criteria, posing significant concern about adding even more demand to the grid.[47]

This risk is further exacerbated by EPA's new carbon dioxide standards for fossil-fuel fired power plants—which comprise the majority of the Southwest Power Pool's energy sources, aside from wind—that may rapidly phase out affordable base-load generation.[48] Far from what the Proposed Rule requires, the infrastructure upgrades to support a U.S. light duty fleet that is only 7% PEV would require an additional $75–125 billion, which would be passed on from utilities directly to customers.[49] Today, energy insecure households, defined as those that are unable to

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[44] Iulian Dnistran, Inside EVs, "EV Charging Stations In The US Are Plagued By Reliability Issues: Study" (Feb. 13, 2023), *available at* https://insideevs.com/news/652195/ev-charging-stations-reliability-low/ (citing JD Power's Electric Vehicle experience Public Charging Study

[45] CONSUMER ENERGY ALLIANCE (CEA), "Freedom to Fuel: Consumer Choice in the Automotive Marketplace," 8 (Aug. 2023), *available at* https://consumerenergyalliance.org/cms/wp-content/uploads/2023/06/CEA_EV_REPORT_2023.pdf [hereinafter, "CEA Study"].

[46] *Id.*

[47] North American Electric Reliability Corporation, *2022 Long-Term Reliability Assessment* (Dec. 2022), 6, *available at* https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_LTRA_2022.pdf (SPP region, including New Mexico, is exposed to energy risks in ways similar to Texas and the U.S. West).

[48] *See* Proposed Rule, "New Source Performance Standards for Greenhouse Gas Emissions From New, Modified, and Reconstructed Fossil Fuel-Fired Electric Generating Units; Emission Guidelines for Greenhouse Gas Emissions From Existing Fossil Fuel-Fired Electric Generating Units; and Repeal of the Affordable Clean Energy Rule," 88 Fed. Reg. 33,240 (May 23, 2023).

[49] CEA Study, at 8.
(noting that the average price to consumers in New Mexico would be $117–195 per year).

adequately meet basic household energy needs because of cost, pay 26 cents more per square foot in energy costs as compared to energy secure households.[50] This disparity will only increase as infrastructure upgrades to accommodate the increased load from ZEVs is passed along to ratepayers.

Absent a comprehensive understanding of the interplay between ZEV manufacturing and charging infrastructure, vehicle manufacturers are left in vulnerable position. If the underlying infrastructure cannot support the influx of EVs, or if consumers perceive the requisite infrastructure is not available or reliable, consumers will simply not purchase ZEVs in the quantities requires for OEMs to meet the proposed standards. Case in point, Toyota has publicly stated that given the three major barriers to widespread ZEV adoption—1) the availability of sufficient critical minerals; 2) a sufficient nation-wide charging infrastructure; and 3) overall affordability—"the most immediate way to reduce carbon emissions is through a mix of electrified options, which includes battery electric, plug-in hybrid, and hybrid vehicles."[51] And until consumers recognize "electric charging stations everywhere like gas stations," they are likely to continue to cite such infrastructure frustrations and range anxiety for ICE purchases.[52]

b. The Proposed Rule is Cost Prohibitive to Taxpayers and Consumer Alike

In addition to the *infeasibility* of delivering an electric grid that can support the ZEVs that OEMs must now produce, the Proposed Rule itself will be severely costly, as further described above and below. Given the low cost of carbon-based transportation fuel, fluctuations in the electricity market, and higher insurance costs, the "break-even" point for a higher-cost ZEV – which may be upwards of $15,000 more than its ICE counterpart—is not a mere few years, but decades.[53] And this calculus is heavily dependent on subsidies, such as the $7,500 tax credit provided by the Inflation Reduction Act ("IRA"), which will change if future policymakers eliminate it or otherwise require ZEVs to compete in the market without a subsidy.[54] Not only will this hinder the widespread adoption of ZEVs, but it will also drive up the cost of used car prices across the country and New Mexico as consumers hold off on buying new cars—especially

[50] EIA, "U.S. energy insecure households were billed more for energy than other households," (May 30, 2023) *available at* https://www.eia.gov/todayinenergy/detail.php?id=56640.
[51] FORBES, "Toyota Says Public Charging Not Ready for Pure EVs," (May 20, 2023) *available at* https://www.forbes.com/sites/brookecrothers/2023/05/20/toyota-admits-inconvenient-truth-about-electric-vehicle-ev-charging-time-prius-prime-rav4-prime/?sh=2b7ed7ab38b1.
[52] Spencer Schact, KOB4, "Albuquerque considers requiring EV chargers in new developments" (Oct. 28, 2023) *available at* https://www.kob.com/new-mexico/albuquerque-considers-requiring-ev-chargers-in-new-developments/.
[53] Javier Colato and Lindsey Ice, BUREAU OF LABOR STATISTICS, "Charging into the future: the transition to electric vehicles," 5, 13 (Feb. 2023) *available at* https://www.bls.gov/opub/btn/volume-12/charging-into-the-future-the-transitionto-electric-vehicles.htm.
[54] This subsidy results in a cost-shifting mechanism from middle-class to wealthy families, *id.* at 14, which may not be supported by future elected officials.

as the New Mexico used vehicle market continues to grow.[55] And in New Mexico, the cost of these ZEVs remains a top considerations barring adoption for consumers, whose average yearly salary is slightly less than the cost of a new ZEV.[56] This is particularly true to more rural areas where lower-income communities are more prominent and rely on ecotourism, which in turn often requires long-distance driving of tourists and visitors.

Beyond the cost to the consumer, the Proposed Rule must also consider the lost fuel tax revenue that will come from the expected reduction in transportation fuel consumption. In 2020, states brought in over $52.7 billion in motor fuel tax revenue which, combined with over $43 billion collected in federal highway-related excise taxes, funded necessary expenditures on highway and road infrastructure.[57] Looking at Colorado as an example, to reach a goal of 100% ZEV adoption, a Consumer Energy Alliance study determined: "the state will need to replace over $1.25 billion in highway and road spending that comes from taxes on gasoline and diesel, a number that will only increase with inflation over time. That amounts to over $560 per household annually."[58] New Mexico figures would be comparable—especially considering that New Mexico may also be needing to make up for over $4 billion in revenue from oil and gas production more generally in the future.[59] Any Proposed Rule must address this significant shortfall and account for how lost tax revenue is recouped or otherwise addressed in conjunction with the increased expense of additional charging infrastructure over a relatively short period of time.

c. The Proposed Rule Ignores Unreliable Supply Chains and the Projected, Increased Dependence on Foreign Sources

Today, the U.S. is virtually independent as a net exporter of petroleum. The U.S. has worked for decades to progress this energy security, which is especially pronounced for transportation fuels (i.e., petroleum- and ethanol-based liquid fuel products) for ICE-powered vehicles. Although it is unclear to what extent New Mexico has considered the effects of its Proposed Rule on New Mexico's and the broader U.S.' domestic "energy security," it is clear that the current state of the global supply chain for those raw materials necessary for ZEV

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[55] Tom Krisher, KRQE, "Used car prices are surging. Here's why you should buy now" (Mar. 30, 2023) *available at* https://www.krqe.com/automotive/used-car-prices-after-finally-easing-are-back-up-again/.

[56] John Cardinale, KOAT, "0.8% of vehicles in New Mexico are electric" (Jul. 6, 2023) *available at* https://www.koat.com/article/electric-vehicles-in-new-mexico/44468809.

[57] CEA Study, at 10.

[58] *Id.*

[59] NEW MEXICO LEGISLATIVE FINANCE COMMITTEE, "Oil and Natural Gas Revenue," (Aug. 2023) *available at* https://www.nmlegis.gov/Entity/LFC/Documents/Finance_Facts/finance%20facts%20oil%20and%20gas%20revenue.pdf.

production,charging infrastructure and energy supply makes NMED's proposed mandate "unachievable even over several decades."[60]

Most illustrative of the future foreign reliance resulting from the Proposed Rule is the lithium-ion battery supply chain controlled nearly entirely by China. China controls each step of battery production and, by 2030, is anticipated to "make more than twice as many batteries as every other county combined."[61] This is because China controls 41% of the world's cobalt, 28% of the world's lithium, and 78% of the world's graphite; China also refines 95% of manganese, 74% of cobalt, 70% of graphite, 67% of lithium, and 63% of nickel.[62] And even if the U.S. had sufficient resources to extract and refine independent of foreign sources, a refinery takes two to five years just to *build*—not accounting for the time necessary for permitting, construction, and operations, including waste disposal.[63] Beyond the raw materials, China also makes the battery components—73% of Lithium-Nickel-Manganese-Cobalt-Oxide cathodes and 99% of Lithium-Iron-Phosphate cathodes—compared to 1% made domestically.[64] Indeed, "[e]xperts say it is next to impossible for any other country to become self-reliant in the battery supply chain, no matter if it has cheaper labor or finds other global partners. Companies anywhere in the world will look to form partnerships with Chinese manufacturers to enter or expand in the industry."[65]

Looking at lithium alone, the "U.S. Geological Survey estimates that in 2022, there was approximately 130,000 tons of lithium mined globally" and that the "quantity of lithium mined would be able to produce just under 14 million EV batteries," not accounting for "the lithium used in other products, including laptop batteries, phones, residential power packs, and utility scale storage."[66] But under proposed ZEV mandates, the global annual light-duty vehicle sales of over 66 million and a global fleet of over 1.3 billion vehicle alone illustrate the difficulty with practically achieving EPA's proposed mandates.[67]

The volatile and increasing costs for these materials further threaten a secure and stable supply chain capable of meeting EPA's proposed demands. Moreover, copper demand is expected to increase by 53% while supply is expected t increase by on 16%—the global copper demand will outstrip supply of copper by just 2026.[68] Similarly, the price of lithium has consistently risen in recent years. Between January 2021 and March 2022, the cost of lithium increased by 738% and

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[60] CEA Study at 9.
[61] Agnes Chang and Keith Bradsher, NY TIMES, "Can the World Make an Electric Car Battery Without China?" (May 17, 2023) *available at* https://www.nytimes.com/interactive/2023/05/16/business/china-ev-battery.html.
[62] *Id.*
[63] *Id.*
[64] *Id.*
[65] *Id.*
[66] CEA Study at 9.
[67] *Id.*
[68] *Id.*

continues to rise today.[69] NMED must consider these findings in assessing and future ZEV mandates or similar standards. At the very least, the limited time afforded under the Proposed Rule is simply insufficient to build the necessary supply chain given the time it takes to develop a robust supply chain to support production of these necessary critical minerals.[70]

VI. The Proposed Rule Ignores Future of Low Carbon Fuels

NMED's Proposed Rule could have a chilling effect on additional investments by companies, such as HF Sinclair, in carbon reducing technologies like carbon capture and sequestration projects, hydrogen, renewable fuels and other low-carbon liquid fuel technologies that can reduce emissions from ICE vehicles. As noted above, HF Sinclair is a leading producer of renewable diesel and if finalized, NMED would be dissuading companies to invest in lower carbon fuels. In addition, HF Sinclair has voluntarily announced a target to reduce its net GHG emissions intensity by 25% by 2030 compared to a 2020 baseline.

HF Sinclair urges NMED to abandon its misguided approach and instead ensure that any forthcoming regulation adopts a holistic approach, which is technology-neutral, recognizes consumer choice, and enables the U.S. transportation industry to continue its efforts to produce safe, affordable, reliable, and clean vehicles.

VII. Conclusion

For the reasons set forth above, NMED should immediately abandon its misguided approach to force New Mexico consumers into a product they do not want. NMED's basis for maintaining the Proposed Rule is illegal at worst and ill-advised at best. By eliminating consumer choice and forgoing a single technology solution to GHG emissions, NMED is directly sending its consumers outside the state to meet their automotive needs, and putting U.S. jobs, industrial base, and the economy at serious risk as highlighted above. Additionally, it is concerning that NMED would prioritize a policy that significantly benefits foreign industrial bases that do not have nearly the environmental oversight existing in U.S. manufacturing.

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[69] *See* CANADA ENERGY REGULATOR, "Market Snapshot: Critical Minerals are Key to the Global Transition" (Jan. 18, 2023), *available at* https://www.cer-rec.gc.ca/en/data-analysis/energy-markets/market-snapshots/2023/market-snapshot-critical-minerals-key-global-energy-transition.html.

[70] *See* 88 Fed. Reg. 29,184, 29,313 (May 5, 2023).