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RE: Amendments to Regulation 7 DE Admin. Code 1140, Delaware's Low Emission Vehicle Program, Docket #2022-R-A-0011

A. Introduction and summary of comments.

A1. AFPM and its interest in DNREC's proposed adoption of ACC II.

The American Fuel & Petrochemical Manufacturers (AFPM) appreciates the opportunity to comment on the Delaware Department of Natural Resources and Environmental Control's (DNREC) proposed amendments to Title 7 of the Delaware Administrative Code, Section 1140 (Delaware Low Emission Vehicle Program). 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 throughout the U.S. AFPM members are also leaders in producing lower carbon fuels, such as renewable diesel and sustainable aviation fuel.

AFPM shares DNREC's goal of reducing the carbon intensity of transportation. Indeed, our members are heavily investing in technologies and processes that will continue reducing the carbon intensity of fuels while automakers continue making improvements to the fuel efficiency of internal combustion engines. Importantly, these investments can achieve carbon intensity reductions for both new and existing vehicles without relying on a lengthy automobile fleet turnover. The reality is reducing the carbon intensity of transportation while meeting consumer needs will require a diverse mix of technologies, including liquid transportation fuels and electric vehicles. Innovation and competition among technologies will simply deliver better results for both the environment and consumers. Putting aside its serious legal and analytical infirmities, DNREC's proposal does exactly the opposite—it stifles innovation and reduces competition by ignoring the fundamental importance of liquid fuels in delivering affordable a reliable energy while reducing emissions. Delaware should withdraw this proposal.

A2. Summary of AFPM's reasons for opposing DNREC's proposal.

DNREC is proposing to adopt the California Air Resources Board's (CARB) Advanced Clean Cars (ACC) II standards, but it is preempted from doing so. DNREC must consider whether the measures called for in the California ACC II rule conflict with or are otherwise preempted by the



statutory mandates of federal legislation such as the Energy Policy and Conservation Act (EPCA); the federal Clean Air Act (CAA), including the Renewable Fuel Standard (RFS) program; and the Energy Independence and Security Act (EISA).

EPCA expressly preempts states from adopting regulations “related to” fuel economy standards, and ACC II falls squarely within that preemptive footprint. Congress did not authorize the National Highway Traffic Safety Administration (NHTSA) or the Environmental Protection Agency (EPA) to waive this express preemption.

ACC II is also expressly preempted by the CAA. Unlike EPCA, EPA may waive federal motor vehicle emissions standard preemption under the CAA under certain conditions. However, California has not obtained a preemption waiver from EPA for ACC II. Not only has California not obtained a waiver for ACC II, ACC II is also not a valid subject for an EPA waiver. As our attached comments on CARB’s ACC II proposal¹ 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.² 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.

Additionally, pending litigation in the D.C. Circuit challenges the CAA preemption waiver mechanism for ACC I, the predecessor to ACC II, which relies on the same purported source of authority. DNREC should wait until this litigation is resolved before adopting ACC II.

Furthermore, DNREC’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, DNREC’s analysis contains unsupported, inaccurate assertions regarding the costs and benefits of its proposed action. DNREC’s analysis thus fails to meaningfully analyze and transparently present the actual costs and benefits of its proposed action. DNREC fails to adequately analyze whether its electric grid can handle the significant increase in demand for electricity that its adoption of ACC II will create, the lifecycle emissions impacts of expanding electricity generation and transmission, as well as electric

¹ Also available at: <https://www.arb.ca.gov/lists/com-attach/477-accii2022-AHcAdQBxBDZSeVc2.pdf> (last visited May 24, 2023).

² U.S. EPA, *Our Nation’s Air: Trends Through 2022*, available at <https://gispub.epa.gov/air/trendsreport/2023/#home> (last visited May 25, 2023).



vehicle (EV) production, the rising price of critical minerals needed for batteries, and the prospect of “leakage” as Delaware residents choose to buy non-EVs in surrounding states.³

DNREC must consider 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 these minerals and metals (particularly copper) to produce batteries and expand the electrical grid.⁴ Adopting policies like ACC II will only increase that dependence. A transition to so-called Zero Emission Vehicles (ZEVs)⁵ would expose Delaware residents to supply chain vulnerabilities largely beyond the control of regulators. This risk is exacerbated by long supply chains⁶ and a reliance on geopolitical rivals who control those supply chains.⁷

Sections B and C of these comments discuss federal preemption of ACC II and pending litigation, while Section D addresses the constitutional barriers to adopting ACC II. DNREC’s failure to demonstrate it has legal authority to adopt ACC II is presented in Section E. In Section F, we highlight the deficiencies in DNREC’s environmental and economic analyses. Finally, Section G describes some of the unintended consequences of California’s initial foray into EV mandates under ACC I.

B. ACC II is preempted by federal law.

Congress has not authorized federal executive agencies or states to force a transition to EVs through government mandates.⁸ 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, it has specifically prohibited EV mandates,⁹ required studies,¹⁰ and provided financial incentives with strict eligibility limits based on domestic production requirements and

³ See also Ramboll, Multi-Technology Pathways To Achieve California’s Greenhouse Gas Goals: Light-Duty Auto Case Study (May 31, 2022), Sec. 1.1, included in AFPM’s attached comments on California’s ACC II proposal: “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.”

⁴ As such, Delaware’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.

⁵ On an LCA basis, of course, there is no such thing as a “zero-emission” vehicle, since all vehicles will have associated upstream and downstream emissions.

⁶ See 2022 Global EV Outlook (IEA May 2022) at 6-7, 178-79, available at <https://www.iea.org/reports/global-ev-outlook-2022> (last visited May 24, 2023).

⁷ *Id.*

⁸ See *West Virginia v. EPA*, 142 S. Ct. 2587 (2022).

⁹ See 49 U.S.C. § 32902(h) (prohibiting considering dedicated automobiles, which includes EVs).

¹⁰ See EISA § 206.



income levels.¹¹ The decision to force a transition to EVs and ban the sale of internal combustion engine vehicles (ICEVs) would constitute a major question of political and economic significance for which Congress must provide a clear statement; no such clear statement exists.

B.1 ACC II is expressly preempted by the Energy Policy Conservation Act.

DNREC lacks authority to adopt or enforce any regulation “related to” fuel-economy standards under EPCA. EPCA’s broad preemption provision prevents California and DNREC from adopting regulations when they are “related to” fuel economy, regardless of any accompanying localized pollution benefits. This provision is self-executing, meaning that no agency action is necessary for it to be effective. Moreover, EPCA contains no authority to waive preemption.

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 DNREC’s Technical Support Document (TSD) specifically analyzes the fuel savings that it projects will result from this rulemaking.¹³ DNREC cannot avoid EPCA’s preemptive effect by characterizing this rule as an environmental regulation despite its clear implications for fuel economy. Indeed, because emissions of the greenhouse gas carbon dioxide 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.¹⁴ Accordingly, “any rule that limits tailpipe [greenhouse gas] emissions is effectively identical to a rule that limits fuel consumption.”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 hybrids or EVs.¹⁶ Delaware’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.2 ACC II conflicts with important federal statutory objectives.

A critical failing of CARB is that in its haste to phase out oil and gas production and refining industries it did not consider the impact of ACC II to the remainder of our energy system. ACC II will sharply curtail, if not eliminate, the demand for biofuels, and will overburden the electricity supply. Nor did CARB consider the impact on other essential products such as jet fuel, asphalt, sulfur, petrochemicals, and lubricants. This willful blindness places ACC II on a collision course with multiple Congressionally mandated programs expressly designed to have the opposite impact: Congress wants to increase biofuels production and ensure a reliable

¹¹ See generally Inflation Reduction Act.

¹² See e.g., *California Restaurant Association v. City of Berkeley*, (9th Cir. April 17, 2023), available at

¹³ See TSD 99-102 (containing forth multiple tables setting forth estimates of fuel savings). See also Regulatory Flexibility Analysis and Impact Statement Form 7 (similar).

¹⁴ 75 Fed. Reg. at 25,324, 25327 (May 7, 2010).

¹⁵ *Delta Constr. Co. v. EPA*, 783 F.3d 1291, 1294 (D.C. Cir. 2015).

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).



electricity supply. Because ACC II undermines and conflicts with the fulfillment of these Congressional objectives, ACC II and DNREC's adoption of ACC II 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.”¹⁷ 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” and “when the state law ‘stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress.’”¹⁸ 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 biofuels is expressed in no less than three statutes, which do everything from mandating biofuel blending in 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. The Federal Power Act provides for investment in alternative fuels through grant programs and loan guarantees. And EISA includes specific provisions to increase energy security through increased production of biofuels under the RFS program and requires blending of increasing volumes of biofuel and other renewable fuels.¹⁹ Specifically, ACC II conflicts with these federal objectives and deprives

¹⁷ *Hillsborough Cty., Fla. v. Automated Med. Lab'ys, Inc.*, 471 U.S. 707, 712-13 (1985) (citations omitted).

¹⁸ *Capital Cities Cable, Inc. v. Crisp*, 467 U.S. 691, 699 (1984) (quoting *Hines v. Davidowitz*, 312 U.S. 52, 67 (1941)); see also, e.g., *Gonzalez v. State*, 207 A.3d 147, 154 (Del. 2019) (“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 be 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)).

¹⁹ 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”); Federal Power Act (42 U.S.C. § 16501: Commercial byproducts from municipal solid waste and cellulosic biomass loan guarantee program – loans by private institutions for the construction of facilities for the processing and conversion of municipal solid waste and cellulosic biomass into fuel ethanol); *id.* § 16503: Sugar ethanol loan guarantee program; *id.* § 16071: Grant



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 continue to play an important role in meeting transportation energy demand for many years.

By contrast, DNREC's adoption of ACC II would eliminate any role for these alternative fuels for new vehicles in Delaware by requiring 100% EVs and PHEVs (Plug-in Hybrid Electric Vehicles) by 2035, removing a substantial portion of the demand for these fuels and depriving federal investments of significant value. This deprivation is made worse by the potential—indeed California's expectation, which DNREC's proposal (and New York State's adoption) has now confirmed—that other states may adopt 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 (177 states vs. the rest of the country).

Further, ACC II expressly contradicts EPCA's requirement that any burdens stemming from energy-use restrictions be reasonably distributed across all industry sectors. Instead DNREC's adoption of ACC II will place the entirety of the burden of these restrictions on the oil and gas production and refining sectors of Delaware's economy.

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.”²⁰ 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 Delaware and other states who may adopt ACC II.

Rapidly electrifying the transportation sector will both substantially increase electricity demand in Delaware and other states that may adopt ACC II and increase dependence on electricity services, amplifying the risk that the grid will be targeted for either physical or cyber-attacks. A 2021 Government Accountability Office Report found that “[t]he grid's distribution systems face significant cybersecurity risks—that is, threats, vulnerabilities, and impacts—and are increasingly vulnerable to cyberattacks.”²¹ According to the report, these risks “are compounded for distribution systems because the sheer size and dispersed nature of the systems present a large attack surface.”²² As demand increases due to accelerated electrification, grid reliability will pose a greater challenge due to additional resource buildout. As recently reported by the

program for the acquisition of alternative fueled vehicles or fuel cell vehicles and the installation of related infrastructure; 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): 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.

²⁰ 42 U.S.C. § 17381.

²¹ Gov't Accountability Office, *Electricity Grid Cybersecurity: DOE Needs to Ensure Its Plans Fully Address Risks to Distribution Systems*, GAO-21-81, at 11 (Mar. 2021), *available at* <https://www.gao.gov/assets/gao-21-81.pdf> (last visited May 16, 2023).

²² *Id.*



North American Electric Reliability Corporation, while electricity supply has improved in 2023 versus 2022, several operating regions are still at risk during periods of peak demand.²³ 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.”²⁴ ACC II will therefore introduce new vulnerabilities to the nation's distribution system by significantly increasing the use of consumer devices.

In addition, the increased demand for electricity under Delaware's proposed adoption of ACC II will worsen existing instabilities in Delaware's grid and in the grids of states that may adopt ACC II, compromising grid reliability in direct contravention of federal policy. ACC II will increase demand despite existing shortfalls, undermining federal requirements targeting increased grid reliability.

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

C. DNREC should wait until pending D.C. Circuit litigation is concluded before adopting ACC II.

DNREC's proposed adoption of ACC II presumes that California has authority to promulgate ACC II. This in turn assumes that ACC II is not preempted by the CAA, by EPCA, or by the RFS.²⁵ As we explain elsewhere in these comments, however, ACC II is in fact preempted.²⁶ And litigation pending before the D.C. Circuit 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

Briefing in the D.C. Circuit on this matter recently concluded, and it will be argued this Fall. The Circuit may not resolve the matter until well over a year from now, with potential Supreme Court *certiorari* proceedings to follow. Separate and apart from all other issues raised in these comments, DNREC at a minimum should wait until the federal judiciary has decided these disputed issues before adopting ACC II. To rush forward with adoption now risks considerable disruption and whipsawing of regulated parties' and other stakeholders' expectations and investments, as well as wasted DNREC resources.

²³ 2023 Summer Reliability Assessment, North American Electric Reliability Corporation, (May 17, 2023).

²⁴ *Id.* at 18.

²⁵ See 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*, No. 22-1081 (D.C. Cir.).



D. DNREC’s adoption of ACC II constitutes a regulatory taking requiring just compensation.

DNREC’s plan to eventually phase out the sales of all ICEVs constitutes a regulatory taking.²⁸ In determining whether a regulatory taking has occurred, courts consider “a complex of factors, including (1) the economic impact of the regulation on the landowner; (2) the extent to which the regulation interferes with reasonable investment-backed expectations; and (3) the character of the government action.”²⁹

AFPM members invested substantial amounts of money in making their refineries, terminals and distribution networks, and renewable fuel facilities safe and productive and, therefore, have significant investment-backed expectations with respect to their properties, at least some of which may be forced to close because of DNREC’s proposed adoption of CARB’s EV mandate. Delaware landowners also would be harmed. Landowners across the state receive compensation from renting their land to companies. Policies that shut down facilities in the petroleum supply chain would prevent companies and Delaware 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 DNREC considers the potential costs of policies that would shut down oil 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.

E. The provisions of law DNREC cites do not authorize DNREC to adopt ACC II

E.1 The provisions of state law DNREC cites do not support its proposal.

DNREC relies on two Delaware statutory provisions as authority for its proposed adoption of ACC II: 7 Del. C. Chapter 60 Environmental Control §§ 6010, 6703.³⁰ Neither provision, in fact, supports the proposal.

First, Section 6010 is simply a general rulemaking statute. It provides that DNREC has rulemaking authority but does not speak to the specific issues involved in this rulemaking. We do

²⁸ See Del. Const. art. I, § 8 (“ . . . nor shall any person's property be taken or applied to public use without the consent of his or her representatives, and without compensation being made”); U.S. Const. Amend. V (“nor shall private property be taken for public use, without just compensation.”). See also *Brown v. Legal Found. of Washington*, 538 U.S. 216, 231-32 n.6 (2003) (“Often referred to as the Just Compensation Clause, the final Clause of the Fifth Amendment provides: ‘nor shall private property be taken for public use, without just compensation.’ It applies to the States as well as the Federal Government.”).

²⁹ *Delmarsh, LLC v. Environmental Appeals Board*, 277 A.3d 281, 294 (Del. 2022) (cleaned up).

³⁰ See Start Action Notice ¶ 3 (citing § 6010 only); Proposal ¶ 4 (citing both Sections); Regulatory Flexibility Analysis and Impact Statement Form 6 (citing § 6703 only); TSD 23-24 (citing both, as well as §§ 6002, 6043, which set forth definitions, findings, and purpose but do not mention vehicles at all, let alone a ZEV mandate, and § 6003, which provides that activities discharging air contaminants require a permit but likewise does not mention vehicles generally or ZEVs specifically).



not contest that DNREC has authority as a general matter to issue environmental regulations, but nothing in this provision expressly supports adopting ACC II or any other form of EV sales mandate.

Second, Section 6703 reads in full:

The Department shall have the power to formulate and promulgate, amend and repeal codes, rules and regulations establishing standards and requirements for the control of air contaminants from motor vehicles.

While this establishes that DNREC has authority over this subject area, it provides no substantive support for this proposal, for two reasons.

First, EVs do not “control” the emission of air contaminants from motor vehicles. The rulemaking’s TSD itself notes as much, stating “By definition, Zero Emitting Vehicles (ZEV) produce no exhaust emissions under any possible operational mode.”³¹ EVs do not *control* emissions; they shift emissions from the tailpipe to emissions associated with electricity generation and battery production. DNREC has not identified any reason why Section 6703 supports adoption of an EV mandate.

Second, even if Section 6703 did not preclude an EV mandate, DNREC’s analysis does not actually demonstrate that adopting ACC II will control, i.e., reduce carbon dioxide emissions in the aggregate, given the flaws in its technical analysis. As we explain in Section F of these comments and in our attached comments on CARB’s ACC II proposal, in the absence of a proper and thorough lifecycle GHG emissions analysis, neither CARB nor DNREC can demonstrate the *aggregate* GHG impact of ACC II.

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 DNREC’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 California’s 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

³¹ TSD 44.



inadequacies in its analysis before adopting ACC II, and DNREC’s own analysis 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 comments on its proposal demonstrated, it was not), DNREC cannot simply rely on CARB. DNREC 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 Delaware’s EVs will charge,³² expected miles traveled by Delaware drivers, Delaware temperature trends throughout the year and their effect on charging needs and battery capabilities, and many other state-specific factors.

E.2 The provisions of federal law DNREC cites do not support its proposal.

DNREC repeatedly cites the “identity” provision of CAA § 177, 42 U.S.C. § 7507, as justifying, or even *requiring*, it to adopt ACC II. Troublingly, the materials in DNREC’s rulemaking docket repeatedly mischaracterize CAA § 177, and the related preemption-and-waiver provision in CAA § 209, 42 U.S.C. § 7543.³³

³² To the extent that DNREC relies on assumptions about residential charging patterns and an anticipated transition to decentralized renewable energy as bases for its apparent view that adopting ACC II will reduce statewide GHG emissions without placing undue stress on the state’s grid, we note that most residential charging will occur at night, when solar power is unavailable and wind power is greatly diminished. These facts underline the deficiencies in DNREC’s analysis and the failure to demonstrate that adopting ACC II will in fact result in the emissions outcome that DNREC projects.

³³ The proposal claims that “Section 177 of the Clean Air Act requires that Delaware standards must be identical to the California standards.” (Proposal 1). For its part, the TSD asserts that “California can adopt motor vehicle standards as described in [CAA] section 209, . . . and other states can adopt the California standards as described in Section 177.” (TSD 24). Elsewhere, the TSD claims:

Congress granted the State of California a preemption waiver permitting that state alone to adopt stricter standards. Congress further granted other states the authority under the CAA to adopt any emissions standards adopted by California. Thus, while states other than California cannot choose to implement their own vehicle emissions standards, they do have the power to adopt California standards in place of the applicable federal standards.

TSD 31-32; *see also id.* at 38 (“As mentioned previously, Section 177 of the Clean Air Act allows California to adopt their own motor vehicle emissions standards . . .”).

The “Start Action Notice” in DNREC’s docket makes an even more egregious mischaracterization of federal law, citing CAA § 177 in response to the form question “IS THIS PROPOSED REGULATORY ACTION REQUIRED AS A RESULT OF FEDERAL STATUTE OR REGULATION?” SAN 2022-01, para. 4. (The SAN also cites 40 CFR 52.426 as “requiring” this rulemaking. This is not the case; this regulation approving certain Delaware State Implementation Plan (SIP) provisions has not been substantively amended since 2012 and makes no reference to the adoption of California standards, let alone to ACC II (which dates to 2022).)

These are flatly incorrect descriptions of federal law. CAA § 209 allows California to *apply to EPA* for preemption waivers. However, California can only adopt and enforce its own vehicle regulations. Other states can only choose whether to remain under federal standards or to adopt California’s standards *once EPA has granted a waiver for those California standards* and the state meets other statutory criteria.



Section 177 is unambiguous, and DNREC’s repeated misstatements are impossible to square with its text, which reads in relevant part “any state ... may adopt and enforce ... standards ... if such standards are identical to the California standards *for which a waiver has been granted* for such model year”³⁴

First, DNREC’s reliance on CAA §177 is misplaced, as that provision only allows states to adopt California vehicle standards once California has obtained a preemption waiver from EPA for those standards and the state meets the other statutory criteria. CAA § 177 therefore not only provides no support for DNREC’s proposal, but in fact highlights that DNREC’s proposal is preempted by federal law.

As EPA’s Administrator recently confirmed in a Congressional hearing, California had at the date of the hearing not even applied for, let alone obtained, an EPA waiver of CAA preemption for ACC II; indeed, California has only applied for this waiver within the past few days.³⁵ Section 177 on its face therefore provides no authority for DNREC to adopt ACC II, and any such adoption would be preempted by the CAA³⁶ unless and until EPA grants a preemption waiver for ACC II and Delaware meets the other statutory criteria.³⁷

Notably, the EPA Administrator said seconds later at the same hearing that he does not support a ban on ICEVs by 2035, casting political doubt on California’s ability to obtain a waiver for ACC II.

³⁴ CAA § 177, 42 U.S.C. § 7507 (emphasis added).

³⁵ See David Shepardson, California seeks EPA approval to ban sales of new gasoline-only vehicles by 2035 (Reuters May 23, 2023), available at <https://www.reuters.com/business/autos-transportation/california-seeks-us-approval-end-gas-only-new-vehicle-sales-by-2035-2023-05-23/> (last visited May 24, 2023). See also Videorecording of U.S. House of Representatives, Energy & Commerce Committee, Environment, Manufacturing, and Critical Materials Subcommittee Hearing: “The Fiscal Year 2024 Environmental Protection Agency Budget” (May 10, 2023), available at <https://energycommerce.house.gov/events/environment-manufacturing-and-critical-materials-subcommittee-hearing-the-fiscal-year-2024-environmental-protection-agency-budget> (video also available at <https://youtu.be/qDSTertIK78>) (last visited May 24, 2023). At 45:40, Administrator Regan states, “We have not received the waiver [request] you’re referencing. . . . The State of California hasn’t submitted a waiver [request] for [Advanced] Clean Cars [II] to the EPA.”

³⁶ See CAA § 209(a), 42 U.S.C. § 7543(a). Indeed, CAA § 209(a) preempts states from both “adop[ting]” and “enforc[ing]” a motor vehicle standard unless EPA issues a preemption waiver. Accordingly, this regulatory action is premature and unlawful.

³⁷ See *Am. Auto. Mf’rs Ass’n v. Comm’r, Mass. Dep’t. of Env’tl 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 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).



Second, ACC II is a California rulemaking establishing additional provisions of California's regulatory code, which are separate code sections for separate model years whose text explicitly provides that they are severable from the remainder of California's car-emissions regulations.³⁸ DNREC identifies no valid reason for why it could not retain the aspects of California's vehicle regulations that it has already adopted without also adopting ACC II,³⁹ especially since CAA Section 177 allows other states to adopt California's standards if "such standards are identical to the California standards for which a waiver has been granted for such model year."⁴⁰ Indeed, DNREC's interpretation of "identity" seems to have evolved without notice. In 2014, Delaware opted into California's GHG tailpipe and criteria pollutants but did not adopt its ZEV mandate. DNREC's historical approach to California's motor vehicle emission standards confirms that the identity requirements of the CAA do not require the State to adopt *every* California standard, especially where each is declared severable.

Third, DNREC could have repealed its existing regulatory requirements resulting from its prior adoption of portions of ACC I, thus harmonizing with existing *federal* standards. CAA § 177 *allows* states to adopt California's standards under certain circumstances but does not *require* them to do so.

In short, not only does CAA § 177 fail to support DNREC's proposed adoption of ACC II, but the federal statutory provision in fact *preempts* adoption at this stage.

F. DNREC's analysis in support of its proposal is arbitrary and capricious.

For the reasons set forth below, DNREC's proposed adoption of ACC II is arbitrary and capricious.

F.1 DNREC's analysis regarding cars, car components, and their costs lacks factual support and is based on unwarranted assumptions.

DNREC repeatedly makes assumptions and predictions with no or inadequate support regarding cars, car components, and the costs of both. It mostly relies on CARB's analysis:

This section will present an overview of current zero emitting vehicle technology and provide information to dispel many of the concerns raised by the public at the November and December public workshops held by the Department which include range anxiety,

³⁸ See CARB, Notice of Public Hearing to Consider Proposed Advanced Clean Cars II Regulations (Mar. 29, 2022), at 7, *available at* <https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2022/accii/notice.pdf> (last visited May 24, 2023) ("The proposed amendments do not encompass substantive updates to CARB's existing greenhouse gas emission standards that are part of the existing ACC program in Section 1961.3 of title 13 of the California Code of Regulations.").

On the severability of ACC II, *see* Cal. Code Regs. tit. 13, § 1961.4(h) ("*Severability*. Each provision of this section is severable, and in the event that any provision of this section is held to be invalid, the remainder of both this section and this article [i.e., Approval of Motor Vehicle Pollution Control Devices (New Vehicles)] remains in full force and effect."); *id.* § 1962.4(o) (same).

³⁹ See 87 Fed. Reg. 14,332, 14,332/1 (Mar. 14, 2022) ("rescind[ing] EPA's 2019 waiver withdrawal, thus bringing back into force the 2013 ACC program waiver").

⁴⁰ 42 U.S.C. § 7507(1).



battery costs and disposal as well as vehicle costs compared to gasoline or diesel fueled products. *Additional information on ZEV technology, market trends, batteries, durability, and technology costs are found in Attachment A – CARB Initial Statement of Reasons Appendix G.*⁴¹

Considering DNREC’s heavy reliance on CARB’s analysis, we attach hereto and incorporate herein by reference our comments on CARB’s ACC II proposal and New York State’s rulemaking adopting ACC II. Below we identify flaws in DNREC’s own statements and analysis.

For example, DNREC states:

The electric vehicle market has seen a significant increase in available models since the Nissan Leaf and Chevrolet Volt 2010 market introductions. Currently, the market has increased from one to 60 models offered through 2021. This rapid market growth and expansion of product offerings over the past decade is expected to accelerate significantly in the next five years.⁴²

DNREC provides no support for its “expect[ation]” that technological progress will increase the EV fleet sufficient to meet the requirements of its proposed adoption of ACC II.⁴³ This is not a meaningful analysis of either feasibility or the important value of consumer choice. Moreover, DNREC 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.

Similarly, with respect to battery costs, DNREC asserts that “the decrease in battery cost[] increases the likelihood of a viable solution for all market segments.”⁴⁴ DNREC here repeats CARB’s mistake, providing inadequate analysis of the question 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 on which its analysis relies. Indeed, DNREC *admits* that the source on which it relies for its expectations regarding future battery cost trends warns of serious problems in the medium term and beyond:

⁴¹ TSD 45 (emphasis added). *See also id.* (“Looking to the future of electric drive technologies in the 2026 to 2035 timeframe, it is anticipated there will be even greater efficiency improvements, longer ranges, and comparable vehicle offerings and capabilities across all passenger car and truck categories and comparable costs to ICE vehicles *as summarized further in California’s Initial Statement of Reasons - Appendix G.*”) (emphasis added).

⁴² TSD 46 (footnotes omitted).

⁴³ 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> (last visited May 26, 2023).

⁴⁴ TSD 59.



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 \$152/kWh (in real 2022 dollars). BNEF expects battery price [*sic*] to start dropping again in 2024, when lithium prices are expected to ease as more extraction and refining capacity comes online. Based on the updated observed learning rate, BNEF's 2022 Battery Price Survey predicts that average pack prices should fall below \$100/kWh by 2026. *This is two years later than previously expected and will negatively impact the ability for automakers to produce and sell mass-market EVs in areas without subsidies or other forms of support. Higher battery prices could also hurt the economics of energy storage projects.*⁴⁵

The source DNREC cites is not alone in raising these concerns. 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 its proposed adoption of ACC II assumes will happen seamlessly. Indeed, lithium-ion battery pack prices have in fact recently begun to *rise*, even before the true impacts of ACC II are felt.⁴⁶ To meet the mandates set by ACC II, the original equipment manufacturers

⁴⁵ TSD 60 (emphasis added).

⁴⁶ 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/> (last visited May 24, 2023) (“Rising raw material and battery component prices and soaring inflation have led to the first ever increase in lithium-ion battery pack prices since [Bloomberg] began tracking the market in 2010. After more than a decade of declines, volume-weighted average prices for lithium-ion battery packs across all sectors have increased to \$151/kWh in 2022, a 7% rise from last year in real terms. The upward cost pressure on batteries outpaced the higher adoption of lower cost chemistries like lithium iron phosphate (LFP). [Bloomberg] expects prices to stay at similar levels next year, further defying historical trends.”); 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> (last visited May 24, 2023) (“Geopolitical turbulence and the fragile and volatile nature of the critical raw-material supply chain could curtail planned expansion in battery production—slowing mainstream electric-vehicle (EV) adoption and the transition to an electrified future. Soaring prices of critical battery metals, as observed in the following chart from S&P Global Commodity Insights, are threatening supplier and OEM profit margins. This situation has quickly translated into increased component and vehicle prices, according to new analysis from S&P Global Mobility Auto Supply Chain & Technology Group. . . . S&P Global Mobility research clearly indicates that established battery raw material supply and processing operations under mainland Chinese ownership will continue to deliver much of the world's supply of lithium-ion batteries and their constituent key elements.”); 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 (last visited May 24, 2023) (“In the complex calculus of energy policies, the decarbonization road map also creates problematic realignments in energy supply chains. Start with the facts that the U.S. today is dependent on imports for 100% of some 17 minerals that are already listed as critical for national and economic security and that, for 28 other critical minerals, U.S. imports account for more than half of existing domestic demand. Factories that assemble batteries or solar hardware in this country would be equivalent to assembling conventional automobiles domestically but importing all the key components and all the fuel. . . . Today, the energy sector uses less than 15% of the various critical minerals that are



(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.⁴⁷ 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.

DNREC points to various federal and state subsidies and incentives to suggest they will offset higher vehicle and infrastructure costs that will result from adopting ACC II.⁴⁸ DNREC does not analyze whether this state of affairs is likely to last and, if it does not, what would be the implications for the cost analysis and overall viability of the regulatory program, let alone whether California, Delaware or any state has the authority to create ZEV credits, the costs of which are borne by gasoline vehicle buyers in other states (without their knowledge).⁴⁹ Moreover, DNREC 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. DNREC must account for the following costs and market impacts which currently are ignored in its proposal:

- Zero-emission vehicle credits, or “ZEV credits.” These credits are a currency created by the State of California to provide supplemental subsidies to achieve their EV sales mandate. DNREC 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

also used for other purposes. But if transition goals were achieved, that share rises from 40% to 70% (at least). Just the pursuit of such an increase and shift in commodities usage would lead to higher and more volatile prices. Even in these early days of potential radical increases in demand, lithium prices are already up nearly 1,000% over the past two years, along with copper trading in a range that’s double the long-run history, nickel trading at a five-year high after coming down from recent peaks, and aluminum prices at a 10-year high. Again, this is the case with SWB [solar, wind, and battery] meeting only a few percentage points of total global energy needs. Escalating mineral demands further will escalate their prices, which will have two macroeconomic impacts: it will increase the costs of the SWB hardware itself—thereby inflating the costs of already expensive transition policies—and it will increase the costs of other manufactured goods competing for the same minerals. The latter is broadly inflationary, and the former reverses the assumption built into all transition forecasts, i.e., that the SWB hardware inevitably becomes cheaper.”).

⁴⁷ 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).

⁴⁸ TSD 79-83.

⁴⁹ ACC II is largely funded on the backs of gasoline (and diesel) car buyers, through hidden state ZEV (and EPA EV GHG multipliers and NHTSA CAFE EV multipliers) credit transfers and payments between automakers, without any communication of these costs to consumers. This scheme violates Federal (and State) laws that prohibit unfair or deceptive acts or practices in or affecting commerce.



scheme. DNREC must disclose who is paying the costs of the ZEV credits. Will Delaware gasoline and diesel vehicle buyers cover the costs of ZEV credits for EV sales in the state, i.e., will the MSRP of a gasoline pickup truck in Delaware 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 Delaware 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, DNREC does not identify or consider these costs. For example, one analyst estimated the value of ZEV credits at \$3,236 per credit.⁵⁰ Under California's rule, ZEV credits are awarded 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 Delaware will impose a hidden cost of approximately \$10,000 on gasoline vehicle buyers nationwide.⁵¹

- 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. DNREC does not estimate the costs of this subsidy to the extent that its proposal increases EV sales. Similarly, DNREC 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. DNREC should provide an estimate of the costs, which will be borne by purchasers of gasoline and diesel vehicles.
- 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.⁵² In other words, EVs have been receiving credit for at least 667% of the real-world

⁵⁰ 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 (last visited May 24, 2023).

⁵¹ 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 Delaware's increase and the gasoline and diesel vehicle buyer pool shrinks, these costs will compound at an increasing rate.

⁵² 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 (last visited May 24, 2023).



fuel economy they achieve on the road and EV manufacturers have been selling these credits to manufacturers of gasoline and diesel vehicles.⁵³ We note that the U.S. Department of Energy (DOE) recently proposed to eliminate this multiplier when calculating the petroleum equivalence factor for EVs.⁵⁴ DNREC 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.

- Tax Revenue Implications. DNREC observes that “Between 2026 and 2040, the [state] government [under adoption of ACC II] would potentially lose \$216 million in revenue if other revenue sources are not found to replace the motor fuel tax.”⁵⁵ Such tax revenue, and its federal counterpart, generally goes to fund building and maintenance of federal and state roads, bridges, and even bicycle lanes. Conversely, EV drivers pay nothing or close to nothing. There are no federal taxes on electricity and most states either exempt most classes of electricity purchases from state taxes or apply de minimis taxes well below 1 percent. Gasoline and diesel drivers also pay higher registration fees and excise taxes in many states. DNREC must deploy meaningful analysis, absent in its proposal, as to how ACC II will shrink the pool of gasoline and diesel vehicles paying taxes and the corresponding shortfall in tax receipts. This is a real and material state impact that California ignored in its proceeding adopting ACC II. DNREC has acknowledged it but has not meaningfully analyzed the ripple effects that will ensue from this loss of revenue.

Finally, DNREC ignores that California and Delaware are vastly different states. Delaware is the second smallest of the contiguous states, while California is the second largest. Delaware is surrounded by larger states with greater populations and options for its residents to purchase vehicles in states without the all-EV mandate DNREC proposes to adopt. This means that Delaware adopting an all-EV mandate before neighboring states makes the state much less likely to achieve the expected benefits of this rulemaking.

⁵³ 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 https://www.nhtsa.gov/sites/nhtsa.gov/files/2015sae-powell-altfuels_cafe.pdf; https://www.nhtsa.gov/sites/nhtsa.gov/files/2022-04/Model-Documents-CAFE-MY-2024-2026_v1-tag.pdf; https://one.nhtsa.gov/cape_pic/home/ldreports/manufacturereperformance. 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.

⁵⁴ 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).

⁵⁵ TSD 106.



DNREC’s own record, in the form of opinion research appended to the TSD, suggests that Delaware’s residents are not likely to adopt EVs.⁵⁶ These data show that only 4% of respondents currently own or lease an EV, that 63% percent say they are not likely to choose an EV the next time they purchase or lease a car, and that only 9% are “very likely to do so.” Even assuming, for the sake of argument, that California’s new ACC II all-EV mandate will achieve the penetration *in California* that California predicts, Delaware’s adopting that mandate is facially unlikely to have a comparable result in Delaware. DNREC has not acknowledged or analyzed the impact of the differences between its drivers’ preferences and California’s.

EVs are more expensive on average than their ICEV counterparts and unaffordable for many households. In the first calendar quarter of 2022, the average price of the top-selling light-duty BEV in the U.S. was about \$20,000 more than the average price of top-selling ICEV.⁵⁷ The price disparity has not improved, with the average price of light-duty EVs near \$66,000 in August 2022 and continuing to rise.⁵⁸ No state, federal agency or automaker publicly shares the cost of state ZEV credits, EPA GHG multiplier credits, nor NHTSA CAFE EV multiplier credits. The documentation in note 53, *supra* suggests that buyers of gasoline vehicles are subsidizing each EV by more than \$25,000, increasing the true average cost of every EV sold to over \$90,000. By contrast, the median household and per capita incomes in Delaware are approximately \$72,724 and \$38,917, respectively.⁵⁹ Additional EV barriers to low-income stakeholders include but are not limited to: limited driving/battery range; inability to charge in different housing and work situations; high price points to purchase, maintain, and insure EVs; availability of replacement parts and qualified mechanics, as well as ease and cost of repairs; and unpredictability regarding future electricity costs.

F.2 DNREC’s analysis of economic impacts is woefully inadequate.

To analyze the economic impacts of adopting ACC II, DNREC again relies on CARB’s analysis.⁶⁰ We incorporate by reference our attached comments on CARB’s ACC II proposal. We further note that Delaware’s wholesale reliance on CARB’s analysis by itself makes DNREC’s proposal arbitrary and capricious, since an analysis of how adopting ACC II would harm or benefit the citizens of *Delaware* cannot be properly conducted by a wholesale reliance

⁵⁶ Appendix A (at 16) to Appendix C to the TSD.

⁵⁷ Registration-weighted average retail price for the 20 top-selling BEVs and ICE vehicles in the U.S. S&P Global, *Tracking BEV prices – How competitively-priced are BEVs in the major global auto markets?* May 2022.

⁵⁸ 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> (last visited 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/> (last visited May 24, 2023).

⁵⁹ Estimates as of July 1, 2022, U.S. Census Bureau, Quick Facts – Delaware, *available at* <https://www.census.gov/quickfacts/DE> (last visited May 24, 2023).

⁶⁰ TSD 107 (“Delaware is utilizing the CARB economic cost-benefit analysis in this Technical Support Document (TSD) to demonstrate the economic costs and benefits of ACC II.”).



on an analysis of ACC II's impacts on another state, particularly one as different from Delaware as California.

First and foremost, without a comparison of the respective state of California's (CAISO) and Delaware's (PJM) electrical grids and the relative status of repairs to these grids that are underway, DNREC has not meaningfully analyzed whether the assumptions underlying CARB's analysis of ACC II apply to its own proposed adoption of ACC II.

Adopting an EV mandate will spike demand for electricity, placing even further upward pressure on electric rates and threatening reliability. Notably, a major Delaware utility recently requested massive rate hikes.⁶¹ DNREC's TSD acknowledges this risk and provides the plaintive statement "Delmarva Power and the Co-op are committed to reliability and want to ensure that customers have the power they will need today and in the future."⁶² But the proposal and its supporting documents provide no meaningful reassurance that this will be the case if ACC II is adopted.

Additionally, Delaware's climate differs from California's, with its colder weather negatively impacting charging efficiency and EV range, affecting both individual and systemic cost analyses.⁶³ Indeed, DNREC notes *nowhere* that its state's climate differs from California's climate, let alone analyzes the implications of this difference.⁶⁴ According to New York Department of Transportations' National Electric Vehicle Infrastructure (NEVI) Plan dated August 2022:

⁶¹ Mark Eichmann, Delmarva Power proposes 'one of the largest' rate hikes in its history (WHYY Dec. 18, 2022), *available at* <https://whyy.org/articles/delmarva-power-rate-hike-2023/> (last visited May 24, 2023).

⁶² TSD 76 ("The reliability of Delaware's electric grid is paramount for supporting a ZEV fleet. Outages must be minimal if the state's infrastructure is to support thousands of new EVs on Delaware's roads. Delmarva Power and the Co-op are committed to reliability and want to ensure that customers have the power they will need today and in the future.").

⁶³ *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/> (last visited May 24, 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 (EEMPower Aug. 8, 2018), *available at* <https://eepower.com/news/quantifying-the-negative-impact-of-charging-evs-in-cold-temperatures/> (last visited May 24, 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.").

⁶⁴ *See* 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> (last visited May 24, 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/> (last visited May 24, 2023).



[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.⁶⁵

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 \$60,000 or higher and in December 2022, they offered 90.⁶⁶ Regulations like ACC I and ACC II are primary drivers of this trend toward eliminating affordable vehicles and DNREC must account for these market impacts to lower-income car buyers.

DNREC vaguely refers to “other policies and programs” that “will be needed” not only in its own state but in other states as well to ensure that lower-income and frontline communities benefit from its proposal to adopt ACC II, tacitly conceding that the proposal itself will not benefit these communities:

While the proposed ACC II regulations will advance equity, a whole-of-government approach is needed to maximize access, ensure affordability, and direct benefits to low-income and frontline communities. Thus, other policies and programs beyond ACC II will be needed in California and Section 177 of the CAA states to ensure these communities benefit from and have direct access to ZEVs.⁶⁷

The only substantive claim DNREC makes here to support its assertion that “the proposed ACC II regulations will advance equity” is a claim that they will reduce vehicle emissions. For the

⁶⁵ 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 DNREC must investigate. *See e.g.* Iulian 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.”).

⁶⁶ *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> (last visited May 24, 2023).

⁶⁷ TSD 115.



reasons stated herein, DNREC has not conducted the analysis necessary to show that overall pollutant reductions will occur. As with other issues such as grid reliability and shifting emissions from the tailpipe to emissions associated with electricity generation, DNREC does little more than acknowledge a serious issue and state in general, aspirational terms what would be required to actually address that issue. This is not rational rulemaking.

Similarly, DNREC's analysis of employment impacts is virtually nonexistent:

While a transition to electric vehicles will likely result in a decrease in some jobs/industries such as automotive repair and maintenance, other industries are expected to increase as a result of the transition. Examples include electric power generation, transmission, and distribution, and chemical manufacturing. Additional jobs involving charger installation and maintenance are expected to be generated.⁶⁸

This is not a meaningful analysis. Auto mechanics for traditional cars are typically engaged for a full workday. The employment needs for monitoring and maintaining an EV charging station are, on their face, likely to differ. DNREC should compare the employment profile of an EV charging station as compared to that of maintenance and refueling jobs at ICEV service stations. Without conducting meaningful analysis, DNREC has no way to compare the decreases it anticipates in some sectors with the increases it anticipates in others.

DNREC also completely ignores other real-world costs, such as higher insurance premiums for EVs and a higher propensity for insurers to 'total' an EV involved in a minor traffic accident, due to both high repair costs and fire risk and associated liabilities.

F.3 DNREC's analysis fails to fully assess the emissions impacts of ACC II.

DNREC asserts that "[t]he proposed amendments will result in reduced NO_x, PM_{2.5} and GHG emissions."⁶⁹ But without a proper and thorough LCA, DNREC cannot substantiate this assertion. 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. DNREC's discussion acknowledges this issue, but does not resolve it:

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 "upstream" emissions at power plants that threaten the health of other communities far from roadways.⁷⁰

⁶⁸ TSD 109.

⁶⁹ TSD 36.

⁷⁰ TSD 88.



DNREC goes on to note the centrality of the utility sector to this issue, which again only highlights that its overall conclusion that adopting ACC II will in fact reduce emissions is ungrounded:

Implementing ACC II, coupled with state and local renewable power goals, are critical steps in protecting public health, preserving a sustainable climate, and bringing the transportation sector to a truly zero emission future. Existing state and national renewable energy policies are already resulting in changes to the electricity grid that are curbing dependence on harmful fossil fuels in favor of cleaner technologies. Ongoing efforts will be needed to ensure that clean, non-combustion renewable energy is the dominant source of power going forward. A full-scale transition to ZEVs will require continued careful coordination between state and federal leadership, utilities, energy regulators and the public in order to protect against increases in “upstream” emissions at power plants that threaten the health of other communities far from roadways. Utilities play an important role here in cleaning up the power grid. They also play an important role in supporting the ZEV market, including by providing special electricity rates for plug-in vehicle customers, investing in charging infrastructure and promoting the benefits of ZEVs to customers.

This discussion does not provide any reason to support DNREC’s apparent belief that changes in the utility sector will ensure that adoption of ACC II will result in a net emission reduction.

Elsewhere, DNREC relies on a general reference to the state’s prospective generation-mix requirements as support for a blanket restatement that adopting ACC II will reduce emissions:

The Renewable Portfolio Standard as amended in 2021 requires that by 2040, up to forty percent of the state’s electricity supplied to customers is generated from renewable sources which include wind, solar, geothermal, ocean energy and fuel cells. As Delaware’s electricity is generated from more and more zero emitting resources, shifting vehicles to electric power will further reduce air pollution.⁷¹

These aspirational gestures towards what *needs* to happen to ensure overall emissions will be reduced cannot substitute for a sufficient demonstration that these things *will* happen. Moreover, since Delaware has joined a regional power market, one which has a high concentration of coal, gas and oil-fired power plants that supply most of the electricity to every customer in Delaware, the in-state power mix is not 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), DNREC cannot demonstrate that its proposal will achieve its stated objectives even directionally, let alone in terms of magnitude.

“Leakage” is of particular concern in Delaware, a small state surrounded by larger ones, and near in particular to dense centers of population in those other states. This fundamental difference between Delaware and California undermines multiple aspects of DNREC’s reliance on CARB’s analysis. Increased electric demand resulting from an EV mandate is likely to result in shifting

71 TSD 66.



emissions from areas outside Delaware’s regulatory control, both because of grid interconnection⁷² and because Delaware EV drivers are more likely to charge their cars in other states than are California drivers. This undermines DNREC’s analysis of whether the ACC II implementation rate is feasible as a threshold matter, as well as what its emissions impacts will be. DNREC needs to conduct an analysis from the ground up based around Delaware’s situation, rather than throwing superficial gestures on top of a wholesale adoption of CARB’s work.

DNREC’s review of emission impacts also completely ignores the higher tire wear, more frequent tire replacement costs, and associated particulate emissions from EVs.⁷³

G. California’s struggles present a cautionary tale for Delaware.

DNREC has not adequately considered the implications that a strategy focused on a singular technology may have on community decision-making and consumer choice, or the unintended consequences that reliance on electrification may present, including foreign supply chain disruptions and forced labor in the production of the raw materials needed to manufacture batteries.⁷⁴

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.⁷⁵ 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 \$4.81 per

⁷² DNREC notes this fact but does not analyze its implications for emissions: “Delaware’s electricity comes from electric generating units located throughout the state *and the Mid-Atlantic region*. The fuels these units use to generate electricity is either natural gas, coal, nuclear or renewable energy.” TSD 66 (emphasis added).

⁷³ See, e.g., Fred Lambert, Goodyear unveils new tire for electric cars to reduce wear from powerful instant torque (Electrek Mar. 8, 2018), available at <https://electrek.co/2018/03/08/goodyear-tire-electric-cars-reduce-wear-instant-torque/> (last visited May 24, 2023); Emissions Analytics, Super Size EV Automotive's obesity crisis (“The excess weight of BEVs is likely to lead to 8.6 mg/km of additional tyre particulate mass emissions....”), available at <https://www.emissionsanalytics.com/news/super-size-ev-automotives-obesity-crisis> (last visited May 24, 2023).

⁷⁴ See U.S. Department of Energy, *2022 List of Goods Produced By Child Labor or Forced Labor*, at 50-51, available at https://www.dol.gov/sites/dolgov/files/ILAB/child_labor_reports/tda2021/2022-TVPRA-List-of-Goods-v3.pdf (last visited May 24, 2023). DNREC acknowledges that “[m]any commentators at the public workshops expressed concerns about the labor practices used in foreign countries for the mining of the minerals mentioned.” TSD 61. Its response to these concerns is to note that the State of Delaware cannot regulate overseas labor practices, and to cite various efforts and directives from the United States government to address this issue—while not analyzing at all whether these measures have had or are likely to have any effect on the problem, and while correctly noting that “Globally, China controls most of the market for processing and refining cobalt, lithium, rare earths and other critical minerals.” *Id.* 61-62. In other words, DNREC acknowledges that the people of Delaware have a serious concern about the human rights implications of a ZEV mandate, acknowledges that this is in fact a real threat, and says “we sure hope someone will do something about this.” This is not a serious analysis of this grave issue.

⁷⁵ California Legislative Analyst’s Office, *Assessing California’s Climate Policies – An Overview* (Dec. 21, 2018).



gallon of gasoline.⁷⁶ 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.⁷⁷ 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.⁷⁸ Delaware should carefully consider the criticisms of California’s policies, such as those leveled by *The Two Hundred*, which point out the disproportionate impacts to working and minority communities.⁷⁹

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.⁸⁰

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

H. Conclusion

Federal law preempts DNREC from adopting ACC II in multiple respects. Separate and apart from this issue, even if DNREC had the ability to adopt ACC II, DNREC 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 DNREC has ignored or inadequately addressed in its process, rendering its proposal arbitrary and capricious. DNREC should address these procedural and analytical deficiencies by conducting technical working groups to foster stakeholder participation in scenario development and assessment.

Multi-technology pathways can help the state achieve faster and more certain emission reductions while expanding ways to reduce greenhouse gas emissions. DNREC should evaluate and propose performance standards as an alternative to its proposed adoption of ACC II and its EV mandate.

⁷⁶ AAA, *California Average Gas Prices – Current Avg.*, available at <https://gasprices.aaa.com/?state=CA> (last visited May 24, 2023).

⁷⁷ 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 (last visited May 24, 2023).

⁷⁸ CEC, “Presentation - Transportation Energy Demand Forecast,” 21-IEPR-03 (Dec. 14, 2021).

⁷⁹ 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).

⁸⁰ See <https://www.ebudget.ca.gov/2022-23/pdf/Revised/BudgetSummary/ClimateChange.pdf> (last visited May 24, 2023).



Thank you for the consideration of our comments. AFPM would welcome the opportunity to discuss these comments and recommendations in more detail with you. Please feel free to contact us at DThoren@afpm.org with any questions or concerns.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'D Thoren'. The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Don Thoren
Vice President

Attachments