No. 24-7

In the Supreme Court of the United States

DIAMOND ALTERNATIVE ENERGY, LLC, ET AL.,
PETITIONERS,

v.

ENVIRONMENTAL PROTECTION AGENCY, ET AL.

ON WRIT OF CERTIORARI
TO THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

JOINT APPENDIX

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Excerpts from Item 7 – LEV – Initial Statement of Reasons, R-7941, EPA-HQ-OAR-2021-0257-0013 (Dec. 7, 2011)

CALIFORNIA ENVIRONMENTAL
PROTECTION AGENCY
AIR RESOURCES BOARD

STAFF REPORT: INITIAL STATEMENT OF REASONS FOR PROPOSED RULEMAKING, PUBLIC HEARING TO CONSIDER THE "LEV III" AMENDMENTS TO THE CALIFORNIA GREENHOUSE GAS AND CRITERIA POLLUTANT EXHAUST AND EVAPORATIVE EMISSION STANDARDS AND TEST PROCEDURES AND TO THE ON-BOARD DIAGNOSTIC SYSTEM REQUIREMENTS FOR PASSENGER CARS, LIGHT-DUTY TRUCKS, AND MEDIUM-DUTY VEHICLES, AND TO THE EVAPORATIVE EMISSION REQUIREMENTS FOR HEAVY-DUTY VEHICLES

This report has been reviewed by the staff of the California Air Resources Board and approved for publication. Approval does not signify that the contents necessarily reflect the views and policies of the Air Resources Board, nor does the mention of trade names or commercial products constitute endorsement or recommendation for use.

Date of Release: December 7, 2011
Scheduled for Consideration: January 26, 2012

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Table III-A-4-8. CO_2 reduction from individual technologies from 2008 reference

Area	Technology	Small car	Mid-size car	Small light-duty truck	Large light-duty truck
Engine technologies	Engine friction reduction	3.50%	4.50%	3.40%	4.20%
	Cylinder deactivation	-	6.10%	4.70%	5.70%
	Discrete cam phasing (DCP)	4.10%	5.20%	4.10%	4.90%
	Discrete variable valve lift (DVVL)	4.10%	5.20%	4.00%	4.90%
	sGDI (18-bar, 33% downsize)	12.20%	14.20%	12.10%	13.60%
	sGDI+DCP+DVVL (18-bar, 33% TDS)	14.90%	17.50%	14.80%	16.80%

	cEGR sGDI+DCP+DVVL (27-bar, 56% TDS)	21.40%	24.30%	21.20%	23.50%
	Compression-ignition DCP diesel	19.80%	21.30%	19.10%	21.30%
Transmission technologies	Torque convertor lock-up	0.40%	0.50%	0.50%	0.50%
	Aggressive shift logic	2.00%	2.50%	1.90%	2.40%
	High efficiency gearbox	3.30%	3.90%	3.80%	4.30%
	Optimized shifting	5.20%	6.60%	5.10%	6.20%
	6-speed automatic	1.80%	2.20%	1.70%	2.10%
	8-speed automatic	6.50%	7.80%	6.80%	7.80%
	Wet dual clutch 8-speed	9.70%	11.50%	10.50%	11.90%
	Dry dual clutch 8-speed	10.30%	12.20%	11.10%	12.60%
	Continuously variable	11.00%	6.30%	6.00%	-
Vehicle load and accessory technologies	Low drag brakes	0.80%	0.80%	0.80%	0.80%
	Secondary axle disconnect	1.20%	1.40%	1.40%	1.60%
	Electric power steering	1.50%	1.30%	1.20%	0.80%
	Improved accessory efficiency	3.30%	3.00%	2.60%	3.50%
	Mass reduction (-10% curb mass)	5.10%	5.10%	5.10%	5.10%
	Mass reduction (-20% curb mass)	10.40%	10.40%	10.40%	10.40%
	Tire low rolling resistance (-10% Crr)	1.90%	1.90%	1.90%	1.90%

	Tire low rolling resistance (-20% Crr)	3.90%	3.90%	3.90%	3.90%
	Aerodynamics (-10% CdA)	2.30%	2.30%	2.30%	2.30%
	Aerodynamics (-20% CdA)	4.70%	4.70%	4.70%	4.70%
Hybrid system technologies	12V stop-start	6.10%	6.80%	5.60%	6.50%
	High-voltage belt-alternator system	7.40%	7.60%	6.80%	8.00%
	Parallel hybrid (23-40 kW)	34.30%	34.60%	32.80%	31.90%
Reference vehicle characteristics	Test weight (lb)	2625	3625	4000	6000
	Rated power (hp)	106	158	169	300
	Rated torque (ft-lb)	103	161	161	365

Notes: All potential CO_2 improvements are from 2008 US baseline technology based on the combined US test procedure (55% UDDS, 45% highway); sGDI= stoichiometric gasoline direct injection; DCP=dual cam phasing; DVVL=discrete variable valve lift; TDS = turbocharged downsize; cEGR= cooled exhaust gas recirculation; DCT = dual clutch transmission

The technologies and their associated percent CO_2 improvements shown above are generally not simply additive. Generally combining any two technologies listed tends to be less than the simple sum of the two CO_2 potential values because of the ways that the two technologies can both impact the same fundamental physical energy efficiency losses through the various vehicle systems (e.g., valvetrain, fuel injection, thermodynamic engine efficiency, transmission, etc). Directly built upon the

Ricardo vehicle simulation modeling results, the USEPA Lumped Parameter model incorporates technologies' system interaction effects when technologies are jointly implemented. The analysis involved from the Ricardo results to the Lumped Parameter modeling is described in detail in the federal agencies' Technical Support Document (USEPA and NHTSA, 2011c).

EPA's modeling involved the analysis of many dozens of technologies configured into technology packages across each of the different vehicle classes. The modeling resulted in varying complexity that ranged from the reference 2008 baseline technology, to many incremental engine and transmission package steps, to advanced hybrids and

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vehicles, the fuel cell electric vehicle crediting equation includes the gasoline upstream adjustment factor to bring the lifecycle GHG crediting into the tank-to-wheel GHG standard. The GHG rating for fuel cell electric vehicles is calculated as follows, based on the hydrogen consumption (H_{FCV}) in kilograms of hydrogen per mile.

$$GHG_{FCV} = (9132\ gCO_2e/kg\ H_2) * H_{FCV} - G_{upstream}$$

In order to provide context for the proposed GHG crediting of battery electric vehicle, plug-in hybrid electric vehicle, and fuel cell electric vehicle technologies, approximate GHG emission ratings for three currently available models are shown here. Included are three example vehicles: an battery electric vehicle at 0.24 kWh/mile (similar to

a Nissan Leaf); a plug-in hybrid electric vehicle with 0.25 kWh/mile, a 0.63 utility factor, and 177 gCO_2/mile exhaust emissions (similar to a Chevrolet Volt); and a fuel cell electric vehicle with 87 miles per kilogram hydrogen (similar to a Honda FCX Clarity). The GHG crediting of these hypothetical vehicles is shown in Table III-A-5-4. As shown all three vehicles would achieve GHG ratings that would give them substantial emission reductions within the GHG crediting framework for California described above, even after factoring in the reduced GHG of all conventional vehicles against which the three vehicles are being compared. The GHG ratings for these current electric-drive vehicle models would be 80-93% below current 2008 technology, 73-91% below 2016 technology, and 69-89% below 2020 technology, respectively. Further efficiency improvements from these current electric-drive technologies (e.g., low rolling resistance tires, mass-reduction, improved aerodynamics, improved accessory loads, low-GHG air conditioning systems), would result in greater percent GHG effectiveness than the reductions shown here when compared to conventional gasoline vehicles.

Table III-A-5-4. Example GHG emission rating from electric-drive vehicles

Technology	Electric energy use (kWh/mi)	Utility Factor	Direct CO_2 emissions (gCO_2/mi)	Hydrogen use (mi/kg)	GHG rating (gCO_2e/mi)	Reduction in GHG emissions versus average new vehicle		
						In 2008	In 2016	In 2020
Electric vehicle	0.240	-	-	-	23	93%	91%	89%
Plug-in hybrid electric vehicle (40-mile)	0.252	0.63	177	-	67	80%	73%	69%
Fuel cell vehicle	-	-	-	87	65	81%	74%	70%

Notes: Upstream GHG emissions based on California 2020 and beyond characteristics for electricity and hydrogen production, and gasoline upstream adjustment, $G_{upstream}$, of 40 gCO_2/mi is assumed for avoided equivalent upstream gasoline usage; use of air-conditioning credits not included; Average assumed new vehicle in California 336 gCO_2/mile in 2008, 251 gCO_2/mile in 2016, and 215 gCO_2/mile in 2020

Off-cycle credit: ARB staff is proposing to adopt the same off-cycle crediting provisions as USEPA at this time and revise, as needed, to maintain alignment with the federal program in future years. The federal USEPA program developed off-cycle crediting provisions for the 2012-2016 rules, and the provisions are being further developed for the 2017-2025 program. The major modification for the 2017-2025

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Table III-A-5-8. Percent of new vehicles with given technology for GHG and GHG-plusZEV compliance scenarios

Scenario	Technology	Percent of vehicles with technology by model year		
		2016	2020	2025
GHG regulation	Aerodynamics (10%+)	61%	79%	100%
	Low RR tires (10%+)	61%	79%	100%
	Mass reduction (10%+)	11%	32%	58%
	Dual clutch transmission	38%	48%	62%
	Gasoline direct injection	33%	50%	72%
	Cooled EGR	0.20%	14%	32%
	Hybrid	4.50%	7.5%	11.3%

	Plug-in hybrid electric vehicle	1.7%	2.0%	1.9%
	Electric vehicle	0.4%	1.7%	1.8%
	Fuel cell vehicle	0.1%	0.5%	0.9%
	Alternative refrigerant	0%	100%	100%
GHG and ZEV regulations	Aerodynamics (10%+)	61%	79%	100%
	Low RR tires (10%+)	61%	79%	100%
	Mass reduction (10%+)	11%	27%	46%
	Dual clutch transmission	38%	47%	56%
	Gasoline direct injection	33%	41%	51%
	Cooled EGR	0.2%	6%	14%
	Hybrid	4.5%	5.2%	5.7%
	Plug-in hybrid electric vehicle	1.7%	5.4%	9.3%
	Electric vehicle	0.4%	2.3%	3.7%
	Fuel cell vehicle	0.1%	0.6%	2.5%
	Alternative refrigerant	0%	100%	100%

The summary results shown above in Table III-A-5-8 represent two scenarios for compliance to achieve the required regulatory GHG levels in the new California fleet. In the national US fleet context, a compliance scenario could resemble technology shares from each of

those two scenarios that are shown. Automakers will be able to use ZEV-type vehicles (for California and ZEV-adopting Section 177 compliance) toward compliance with national USEPA GHG standards. California and other ZEV-adopting states[31] amount to about 29% of US light-duty vehicle sales. As a result, ZEV requirements in ZEV states alone would amount to a minimum of about 4% national US share for all ZEV types. The non-ZEV technology shares, nationally and in California, could be more similar to the "GHG only" scenario (e.g., over 70% GDI and over 10% hybrid shares). As a result, staff believes that it is possible that selling the required ZEV shares in California, along with a nationally compliant GHG fleet, could deliver some amount of over-compliance with the GHG standards within California. However, it is uncertain exactly if or how automakers might choose to differentially sell various vehicle technology types across California and the rest of the US.

Price of compliance: Due to the incremental price increases associated with the technologies that are used toward compliance, the average vehicle is projected to experience increasing vehicle prices through the vehicle rulemaking period. Assuming that all of the associated direct manufacturing and indirect cost mark-ups are passed on to consumers, Table III-A-5-9 summarizes the incremental vehicle price increase that

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[31] Currently Arizona, Connecticut, Maine, Maryland, Massachusetts, New Jersey, New Mexico, New York, Oregon, Rhode Island, and Vermont.

These expenditures would in turn bring about additional (indirect) changes in the California economy that may change the overall costs of the regulation to the economy. Increased vehicle prices, for example, may result in a reduction of demand for other goods and services as consumers use more of their money to pay for the price increase. California firms may respond by cutting back production and decreasing employment. On the other hand, in response to the proposed regulations automobile manufacturers are expected to choose technologies that reduce vehicle operating costs, leaving consumers with additional money to spend on products and services. This would, in turn, induce firms supplying those products and services to expand their production and increase their hiring of workers. A third type of effect occurs when purchase of the new vehicles directly lowers demand for the petroleum refining and gasoline distribution sectors.

The changes caused by the proposed regulations will affect industries both negatively and positively. The net effect on the California economy of these activities hinges on the extent to which products and services are obtained locally. Using the E-DRAM model of the California economy, staff estimated the net effects of these activities on affected industries and the overall economy. The California industries and individuals affected most by the proposed Advanced Clean Cars program are those engaged in the production, distribution, sales, service, and use of light- and medium-duty vehicles as well as the refining and distribution of gasoline.

Table VII-C-1, Table VII-C-2, and Table VII-C-3 summarize the impacts of the proposed climate change

regulations on the California economy for forecast years 2020, 2025, and 2030 respectively. The results of the E-DRAM simulation show that the changes caused by the proposed regulations would increase the California economic output by roughly $2 billion (0.1 percent) in 2020, $8 billion (0.2 percent) in 2025, and $14 billion (0.3 percent) in 2030. Personal income would increase more gradually, remaining almost unchanged in 2020 but increasing by roughly $3 billion (0.1 percent) in 2025, and $6 billion (0.2 percent) in 2030. As a result, California net employment impacts due to the proposed regulation would also remain about constant in 2020, but increase slightly by 21,000 jobs (0.1 percent) in 2025, and 37,000 jobs (0.2 percent) in 2030.

Table VII-C-1. Economic Impacts of the Proposed Advanced Clean Cars (ACC) Regulations on the California Economy in Fiscal Year 2020 (2009 dollars)

California Economy	Without ACC Regulations	With ACC Regulations	Difference	% of Total
Output (Billions)	$3,600	$3,602	$2	0.1
Personal Income (Billions)	$2,171	$2,172	$1	0
Employment (thousands)	17,913	17,919	6	0

Note: Difference of individual columns may not match due to rounding.

* * *

parts of the country or the world, though conservatively such positive impacts are not assumed in the modeling.

2. AFFILIATED BUSINESSES

The E-DRAM results reflect the overall impacts to the statewide economy. While positive at the aggregate level, some individual sectors may experience negative impacts. As the directly regulated automotive manufacturing sector currently has a limited presence in California, indirect effects on affiliated businesses are likely to be of greater interest. Potential effects are discussed qualitatively here and in a more quantitative fashion in section VIII.C.5 and Appendix S for affiliated businesses located in low-income cities.

The oil and gas industry, fuel providers, and service stations are likely to be the most adversely affected by the proposed Advanced Clean Cars program due to the substantial reductions in demand for gasoline – exceeding $1 billion beginning in 2020 and increasing to over $10 billion in 2030. Some jobs could be transferred from refineries or fuel providers to the electricity generation or hydrogen production sectors or other unaffiliated businesses. Likewise, some service stations may be able to transition to providing alternative fuel types to offset these losses. However, a net loss to these businesses would be expected overall.

Vehicle dealers may also be affected due to changes in vehicle sales. In 2010, 55 percent of average new vehicle dealership revenue was generated by new vehicle sales and another 24 percent from used vehicle

sales.[46] The effect of the proposed program on vehicle price increases and subsequently on new and used vehicle sales are further discussed in section IX.A and IX.B. Those analyses suggest that new vehicle sales in California would increase slightly as a result of the proposed amendments, which would in turn increase dealer revenues due to the higher sales volume as well as the higher vehicle prices. However, the higher new vehicle sales may reduce populations of older vehicles, which could reduce business for the parts and servicing departments at dealerships (and independent repair shops). On the other hand, the greater penetration of new advanced vehicle technologies may result in servicing needs that can only be fulfilled at the dealership. Additionally, dealers may need to provide training to sales and servicing staff to familiarize them with many of the new ZEV technologies anticipated to be offered as a result of the proposed program.

The effects on used vehicle dealers (or the used vehicle department at a new vehicle dealership) are more ambiguous. Higher sales volumes of new vehicles do not necessarily imply that used vehicle sales must fall. A vehicle can be sold only once new and some are never resold while others might be resold numerous times. New vehicle buyers frequently trade in an existing vehicle, generating both a new and used vehicle sale. In addition, assuming that the higher price of new vehicles translates into

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[46] California New Car Dealers Association 2011 Economic Impact Report, http://www.cncda.org/secure/GetFile.aspx?ID=2106 (Accessed November 2, 2011)

Excerpts from Item 4 – ZEV – Initial Statement of Reasons, R-8158, EPA-HQ-OAR-2021-0257-0012 (Dec. 7, 2011)

CALIFORNIA ENVIRONMENTAL
PROTECTION AGENCY
AIR RESOURCES BOARD

STAFF REPORT: INITIAL STATEMENT OF REASONS

ADVANCED CLEAN CARS

2012 PROPOSED AMENDMENTS TO THE CALIFORNIA ZERO EMISSION VEHICLE PROGRAM REGULATIONS

This report has been reviewed by the staff of the California Air Resources Board and approved for publication. Approval does not signify that the contents necessarily reflect the views and policies of the Air Resources Board, nor does the mention of trade names or commercial products constitute endorsement or recommendation for use.

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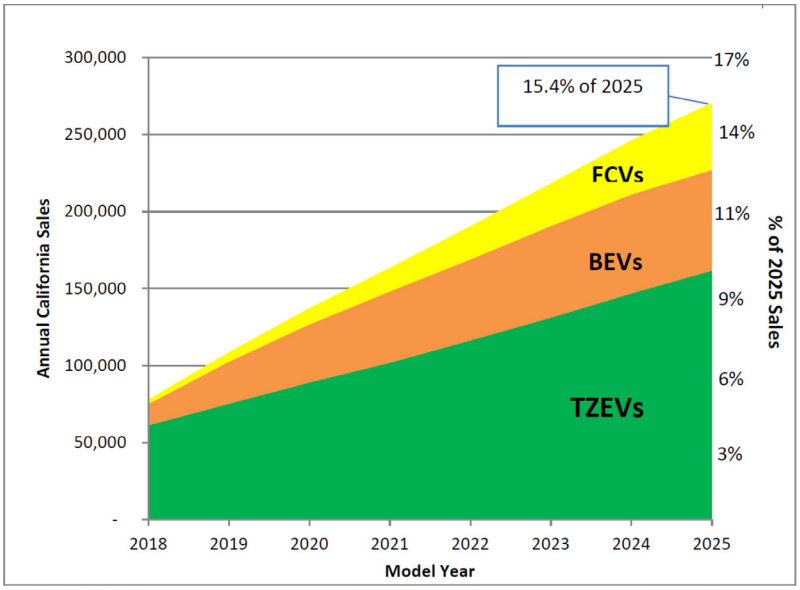
Figure 9: Expected Compliance for 2018 through 2025 Model Years



The expected numbers for each model year are enumerated in Table 3.6 below. These numbers are based on future sales projections from ARB's Emissions Inventory Model, (EMFAC) 2011[36].

[36] ARB 2011b. California Air Resources Board. Emission Inventory Model, EMFAC 2011. http://www.arb.ca.gov/msei/msei.htm

Table 3.6: Number of Vehicles Expected Annually – 2018 through 2025 Model Year (Expected Compliance Scenario - Rounded to Nearest 100)

	2018	2019	2020	2021	2022	2023	2024	2025	Cumulative TOTAL
FCVs	2,900	6,200	10,600	15,400	21,600	27,800	35,200	43,600	163,300
BEVs	13,900	27,300	37,700	46,300	52,600	59,500	64,200	65,400	366,900
TZEVs	61,300	75,300	89,100	101,900	116,300	131,200	146,900	161,700	883,700
Total Vehicles	78,100	108,800	137,400	163,600	190,500	218,500	246,300	270,700	1,413,900

There are an innumerable number of compliance scenarios. As explained above, manufacturers are not required to make each technology stated in Table 3.6. LVMs

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directly connect renewable power to BEVs and PHEVs at home may influence the value customers consider in purchasing these vehicles.[56,57]

5.4 Potential Impact on Business Competitiveness

Automobile manufacturing in California represents a small fraction of the State's economy, less than 0.5 percent. The California businesses impacted by this regulation are largely indirectly affected as affiliated businesses such as gasoline service stations, automobile dealers, and automobile repair shops. Affiliated businesses are mostly local businesses. These businesses compete within the State and generally are not subject to competition from out-of-state businesses. Therefore, the proposed regulations are not expected to impose significant competitive disadvantages on affiliated businesses.

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[56] UC Davis, 2010. University of California, Davis. J.Axsen and K.Kurani. July 2010. "*Reflexive Layers of Influence (RFI): A model of social influence, vehicle purchase behavior, and pro-societal values.*"

[57] UC Davis, 2011c. University of California, Davis. T.Turrentine et al. Mary 2011. "*The UC Davis MINI E Consumer Study.*"

5.5 Potential Impact on Business Creation, Elimination or Expansion

California businesses that purchase the same LDVs as consumers would, like consumers, pay higher prices for the vehicles but save on operating costs, as is discussed in Section 5.3 above.

It is very likely that savings from reduced vehicle operating costs would end up as expenditures for other goods and services. These expenditures would flow through the economy, causing expansion or creation of new businesses in several sectors. Staff's economic analysis shows that as the expenditures occur, jobs and personal income increase. As discussed in the LEV III ISOR, the Environmental Revenue Dynamic Assessment Model (E-DRAM) was used to assess the overall impact of the regulation on California's economy. Specifically, E-DRAM was used to estimate impacts on California's output of goods and services, personal income, and employment. In the analysis for the full ACC program which includes the proposed amendments to the ZEV regulation, jobs increase by 0.1 percent in 2025, and 0.2 percent in 2030 compared to the baseline economy that excludes the proposed ACC program. Similarly, personal income grows by $1 billion in 2020, by $3 billion in 2025, and $6 billion 2030. The estimates of the regulation's impact on these economic factors are used to assess the potential impacts on business creation, elimination, or expansion in California.

Staff's proposed amendments will likely increase benefits to companies specializing in ZEVs and ZEV infrastructure.

The creation of these businesses cannot be fully attributed to staff's proposed amendments. Business and job creation from advanced vehicle technologies is part of the clean technology sector, which is currently experiencing higher than average job growth in California and nationally.[58] However, staff's proposal will likely increase opportunities for California-based manufacturers to generate credits through production of ZEVs and TZEVs to increase flexibility for regulated manufacturers who may purchase credits for ZEV regulation compliance. Some specific sectors are discussed below.

5.5.1 Manufacturing

Staff's proposed amendments will require increased manufacturing of ZEV and PHEV componentry. There is very little vehicle component and final assembly in California, most of it occurring in other parts of the United States and internationally. However, as the ZEV amendments are expected to increase demand for these components and vehicles, these businesses would likely expand, which could offset any reductions experienced in the conventional vehicle segment.

In California, smaller manufacturers not currently mandated to build ZEVs under the regulation do have plans to increase ZEV and ZEV component production. One vehicle assembly plant in the state, formerly a joint venture between General Motors and Toyota that

[58] Brookings, 2011. The Brookings Institution. M. Muro, J. Rothwell, and D. Saha. "Sizing the Clean Economy: A National and Regional Green Jobs Report"

produced conventional vehicles, was recently purchased by Tesla, a California company developing BEVs. Tesla intends to use the facility to manufacture the Model S BEV due to arrive on the market in mid-2012. At one time, the Fremont facility employed approximately 4,000 people. Under Tesla's plans, it may employ nearly 1,000 people. Coda Automotive, another California BEV company has announced plans to assemble vehicles in Benicia, California.[59]

5.5.2 Infrastructure

Staff's proposed amendments will increase demand for fueling infrastructure in California. There are several California-based companies developing electric vehicle charging equipment, including Coulomb, AeroVironment, Better Place, Clipper Creek, and 350Green. Additional non-California based electric vehicle supply equipment (EVSE) providers are installing equipment in the state to support the growing BEV and PHEV markets – including ECOtality, Leviton, and General Electric. Many of these companies are leveraging external grants, for example U.S. DOE awards, and marketing and installing chargers in California.[60]

Several major companies are entering the EVSE market and using traditional large retail outlets. General Electric

[59] BusinessTimes, 2011. San Francisco Business Times, September 12, 2011. "Coda to assemble electric cars in Benicia" http://www.bizjournals.com/sanfrancisco/news/2011/09/12/coda-to-assemble-evs-in-benicia.html

[60] Coulomb, 2011. Coulomb ChargePoint America. Website. http://chargepointamerica.com/. Accessed September 20, 2011

is planning to distribute its EVSE, the WattStation, through Lowes home improvement stores.[61] Ford and its EVSE supplier, Leviton, are partnering with Best Buy and its Geek Squad for retail and distribution of their equipment to homes.[62] Over time, it is expected that partnerships will grow and innovative business models will emerge for servicing and installing EVSE.

Staff's proposal will also create a demand for hydrogen fueling stations[63]. Several companies are already active in developing these stations, including Air Products, Praxair, and Linde. Most of the hydrogen dispensed at these stations is expected to be produced within the state, primarily from central production facilities and then transported by truck to retail outlets. The Clean Fuels Outlet (CFO) ISOR provides more information regarding future hydrogen fueling demand, and infrastructure development.

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[61] Green Car Congress, 2011a. Green Car Congress.com, July 18, 201.1 "GE Energy partners with Lowe's to provide EV chargers for home and commercial use; Siemens Energy providing chargers to Town of Cary, NC" http://www.greencarcongress.com/2011/07/gesiemens-20110718.html Accessed September 9, 2011.

[62] Green Car Congress, 2011b. Green Car Congress.com, January 13, 2011 "Ford developed home charging station for the Focus with Leviton" http://www.greencarcongress.com/2011/01/ford-20110113.html

[63] CaFCP, 2009. California Fuel Cell Partnership. CaFCP Action Plan, February 2009. "Hydrogen Fuel Cell Vehicle and Station Deployment Plan: A Strategy for Meeting the Challenge Ahead" http://www.cafcp.org/sites/files/Action Plan FINAL.pdf

5.6 Potential Costs to Local and State Agencies

The proposed amendments are not expected to result in an increase in costs for local and state agencies in the next three to five years. However, as advanced vehicles enter the fleet in larger numbers (10-15 years from now), there will likely be an impact to state and local revenue from vehicle and fuel sales taxes.

As a result of the projected fleet from the proposed ACC program, large revenue losses could occur in later years unless fuel tax policy changes occur. The vast majority of the fuel tax loss will result from gasoline vehicles given that the existing tax structure applies only to gasoline and diesel fuel and has not changed over the years to adjust for inflation or changes in consumption levels. Although a small portion of the funding shortfall, ZEVs will result in a loss of fuel taxes because there are currently no road taxes on hydrogen and electricity sold for vehicles. Between 2017 and 2025, if gasoline taxation rates remain the same, California fuel tax revenue losses would be approximately $3.8 billion[64], only a small portion of which would be associated with the ZEV population. These state revenue losses will partially be offset by higher vehicle sales tax revenues given the higher incremental vehicle prices.

Although not a direct effect of the ZEV regulation, local governments will need to devote resources to planning and implementing electric charging and hydrogen

[64] See Appendix C for more information.

infrastructure. These impacts are becoming clear as the Nissan Leaf and General Motors Volt are entering California communities, and as new hydrogen stations are being constructed today. These impacts can include the need to prepare city inspectors and permitting officials to approve residential charging equipment; the need for city planning officials to identify appropriate public and workplace charging; and the need for local officials to help evaluate and permit hydrogen stations.

To reduce the impact on local agencies, there are a number of programs designed to help communities implement planning programs for alternative fuels.[65,66,67] For

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[65] Sonoma, 2011. County of Sonoma (CA), General Services Department, July 2011. "Electric Vehicle Charging Station Program and Installation Guidelines"

[66] Rocky Mountain Institute, 2009. Rocky Mountain Institute, February 24, 2009. "Project Get Ready: Helping Communities Become Electrified Vehicle Pioneers"

Excerpts from 2012-06-27 ACC Waiver Request, R-7, EPA-HQ-OAR-2021-0257-0006 (dated May 2012)

BEFORE THE UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY

IN THE MATTER OF CALIFORNIA'S REQUEST FOR WAIVER ACTION PURSUANT TO CLEAN AIR ACT SECTION 209(B) FOR AMENDMENTS TO CALIFORNIA'S ZERO EMISSION VEHICLE REGULATION AND LOW EMISSION VEHICLE REGULATIONS

CLEAN AIR ACT § 209(B) WAIVER SUPPORT DOCUMENT SUBMITTED BY THE CALIFORNIA AIR RESOURCES BOARD

May 2012

I. INTRODUCTION

California's Air Resources Board (CARB or the Board) has developed the Advanced Clean Cars program, a pioneering approach of a "package" of regulations that, although separate in construction, are related in terms of the synergy developed to address interrelated ambient air quality needs and climate change.

The Advanced Clean Cars program combines the control of smog, soot causing pollutants and greenhouse gas emissions into a single coordinated package of requirements for model years (MY) 2015 through 2025 and assures the development of environmentally superior

passenger vehicles. The Advanced Clean Cars package includes amendments to three regulations: the Low Emission Vehicles regulation (LEV), the Zero Emission Vehicles regulation (ZEV), hereinafter "2012 ZEV/LEV Amendments," and the Clean Fuels Outlet regulation. Two of these regulations, LEV and ZEV, require a federal waiver submittal under the Clean Air Act (CAA).

The earliest requirements of the LEV regulation as amended are set to affect MY 2014 vehicles. Consequently, manufacturers would benefit from the increased lead time that an expedited consideration of this waiver request would allow. The remainder of this support document provides background for California's LEV and ZEV regulations, details their recent amendments, and gives the basis for CARB's waiver or within the scope request for each.

II. ZEV REGULATION

A. BACKGROUND AND WAIVER HISTORY

In 1990, CARB adopted an ambitious program to significantly reduce the environmental impact of light-duty vehicles through the commercial introduction of ZEVs into the California fleet. The ZEV program, which was a part of California's first-generation low-emission vehicle regulations (LEV I), has been modified five times since its inception—in 1996, 1998/1999, 2001, 2003, 2008, and most recently in 2012.[1]

[1] A detailed account of these modifications, and their waiver history, can be found in 71 Fed Reg 78190-78191(Dec. 28, 2006) and 76 Fed Reg 61095-61096 (Oct 3, 2011).

The 2012 ZEV amendments flow from the Board's 2008 direction to CARB staff to redesign the 2015 and subsequent MY requirements for the ZEV regulation. The Board directed its staff to strengthen the regulation above what was currently required and focus primarily on zero emission drive, that is battery electric vehicle (BEV), hydrogen fuel cell electric vehicle (FCV), and plug-in hybrid electric vehicle (PHEV) technologies. The goal of the Board direction was to maintain California as the central location for moving advanced, low greenhouse gas (GHG) technology vehicles from the demonstration phase to commercialization.

In 2009, CARB staff analyzed pathways to meeting California's long term 2050 GHG reduction goals in the light-duty vehicle subsector. The analysis showed that ZEVs would need to reach nearly 100 percent of new vehicle sales between 2040 and 2050, with commercial markets for ZEVs launching in the 2015 to 2020 timeframe. The analysis concluded that even widespread adoption of advanced conventional technologies, like non-plug-in hybrid electric vehicles (HEV), would not be enough to meet the 2050 GHG targets. Staff presented its findings at the December 2009 Board hearing.

At the December 2009 hearing, the Board adopted Resolution 09-66, reaffirming its commitment to meeting California's long term air quality and climate change reduction goals through commercialization of ZEV technologies. The Board further directed staff to consider shifting the focus of the ZEV regulation to both GHG and criteria pollutant emission reductions, commercializing ZEVs and PHEVs in order to meet the 2050 goals, and

to take into consideration the new LEV fleet standards and propose revisions to the ZEV regulation accordingly.

In addition to the Board's directives, in 2010, President Barack Obama directed the United States Environmental Protection Agency (EPA) and National Highway Traffic Safety Administration (NHTSA) to work with California to develop GHG fleet standards for MY 2017 through 2025 LDVs. The Joint Technical Assessment Report (TAR), which was developed by EPA, NHTSA, and CARB, was released in September 2010. The report concluded "electric drive vehicles including hybrid(s)…battery electric vehicles…plug-in hybrid(s)…and hydrogen fuel cell vehicles…can dramatically reduce petroleum consumption and GHG emissions compared to conventional technologies.... The future rate of penetration of these technologies into the vehicle fleet is not only related to future GHG and corporate average fuel economy (CAFE) standards, but also to future reductions in HEV/PHEV/EV [electric vehicle] battery costs, [and] the overall performance and consumer demand for the advanced technologies…."[2] Manufacturers confirmed in meetings leading up to the release of the TAR their commitment to develop ZEV technologies. "…[A] number of the firms suggested that in the 2020 timeframe their U.S. sales of HEVs, PHEVs, and EVs [electric vehicle] combined could be on the order of 15-20 percent of their production."[3]

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[2] EPA, 2010. United States Environmental Protection Agency, National Highway Safety and Traffic Administration and California Air Resources Board. September 2010. "Interim Joint Technical Assessment Report: Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards for Model Years 2017-2025" (p. vii).

[3] *Id.* at pp. 2-5.

For the California ZEV rulemakings described above, the Board sought and obtained waivers of federal preemption from the EPA under Clean Air Act (CAA) section 209(b). EPA granted California an initial waiver of federal preemption for California's original 1990 ZEV requirements in January 1993 as part of the LEV I waiver.[4] In January 2001, it found that the Board's 1996 ZEV amendments, which amended manufacturer ZEV production mandates for MY 1998 through 2002, were within the scope of the originally granted 1993 waiver.[5] In December 2006, EPA determined that the 1999, 2001, and 2003 ZEV amendments as they applied to 2007 and prior MY passenger cars and light-duty trucks equal to or less than 3,750 pounds loaded vehicle weight (LDT1) also fell within the scope of the 1993 waiver.[6] It further granted California a new waiver for MY 2007 through 2011 passenger cars and light-duty trucks, including light-duty trucks with a loaded vehicle weight greater than 3,750 pounds (LDT2).[7]

In its December 2006 decision, EPA expressly made no finding as to MYs 2012 and later.[8] In September 2009,

[4] 58 Fed.Reg. 4166 (Jan. 13, 1993).

[5] 66 Fed.Reg. 7751 (Jan. 25, 2001). See section IV.A.1., *infra*, for discussion of EPA's within the scope analysis.

[6] 71 Fed.Reg. 78190 (Dec. 28, 2006). In the alternative, EPA found that the amendments affecting these vehicles also met the requirements for a granting of a full waiver. *Id.*, Decision Document accompanying waiver decision at p. 61.

[7] *Id.*

[8] *Id.*

CARB submitted a Waiver request to EPA seeking confirmation that amendments to the ZEV regulation adopted in 2008, as they relate to the vehicles of 2011 and earlier MYs, were within the scope of EPA's prior ZEV waivers. Additionally, CARB sought confirmation that its 2008 ZEV amendments, as they relate to 2012 and later MYs, were within the scope of EPA's prior waivers or otherwise met the criteria for a waiver of preemption. On October 3, 2011, EPA determined that amendments to the ZEV regulations, as they affected 2011 and prior MYs, were within the scope of previous waivers for the ZEV regulations (or in the alternative qualified for a new waiver).[9] At that time EPA also granted a waiver allowing California to enforce the 2008 ZEV amendments as they affected 2012 and later MYs.[10]

B. 2012 ZEV AMENDMENTS

The subject amendments to California's ZEV regulation are described below in two parts based on the timeframe during which they apply. These timeframes are: 1) MY 2012 through 2017; and 2) MY 2018 and beyond. The amendments identified in this section B. represent the most significant changes during each of these timeframes.

1. 2009 through 2017 Model Year Amendments

CARB's goal for amendments affecting the current ZEV regulation through MY 2017 was to make minor

[9] 76 Fed.Reg. 61095 (Oct. 3, 2011).

[10] *Id.*

mid-course corrections and clarifications and to enable manufacturers to successfully meet 2018 and subsequent MY requirements. These amendments included:

a. *Provision of Compliance Flexibility*: Removed carry forward credit limitations for ZEVs, allowing manufacturers to bank ZEV credits indefinitely for use in later years. Slightly reduced the 2015 through 2017 credit requirement for intermediate volume manufacturers (IVM, less than 60,000 vehicles produced each year), to allow them to better prepare for requirements in 2018. Extended the provision that allows ZEVs placed in any state that has adopted the California ZEV regulation to count towards the ZEV requirement through 2017 (i.e. extending the "travel provision" for BEVs through 2017).

b. *Adjustment of Credits and Allowances*: Increased credits for Type V (300 mile FCV) ZEVs to appropriately incentivize this longer-term technology.

c. *Addition of New Vehicle Category*: Added Type I.5x and Type IIx vehicles (collectively "BEVx" vehicles) as a compliance option for manufacturers to meet up to half of their minimum ZEV requirement. The proposed vehicle types are closer to a BEV than to a PHEV, in that they are vehicles primarily designed for zero-emission operation but are equipped with a small non-ZEV fuel auxiliary power unit (APU) to be used only

for limited range extension if the zero-emission capacity is depleted.

2. 2018 and Subsequent Model Year Amendments

CARB's goal for amendments affecting 2018 and subsequent MYs is to achieve ZEV and transitional zero-emission vehicle (TZEV; most commonly a PHEV) commercialization through simplifying the regulation and pushing technology to higher volume production in order to achieve cost reductions. The amendments included:

a. *Increased ZEV Requirement for 2018 and Subsequent MYs*: Increased requirements which push ZEVs and TZEVs to over 15 percent of new sales by 2025. This will ensure production volumes are at a level sufficient to bring battery and fuel cell technology down the cost curve and reduce incremental ZEV prices.

b. *Regulation Focused on ZEVs and TZEVs*: Removed PZEV (near-zero emitting conventional technologies) and advanced technology PZEV (AT PZEV, typically non-plug-in HEVs) credits as compliance options for manufacturers because these technologies are now commercialized and their emissions are better reflected in the LEV III program. Allowed manufacturers to use banked PZEV and AT PZEV credits earned in 2017 and previous MYs, but discount the credits, and place a cap on usage in 2018 and subsequent

MYs. Focused the 2018 and subsequent MY requirements on ZEVs and TZEVs

c. *Amended Manufacturer Size Definitions, Ownership Requirements, and Transitions*: Amended IVM and large volume manufacturer (LVM) size definitions to bring all but the smallest manufacturers under the full ZEV requirements by MY 2018. Aligned LEV III and ZEV ownership requirements, so that manufacturers who own more than 33.4 percent of each other are considered as the same manufacturer for determination of size. Modified transition periods for manufacturers switching size categories. These changes result in applying the ZEV regulation to manufacturers that represent 97 percent of the light-duty vehicle market.

d. *Modified Credit System*: Based credits for ZEVs on range, with 50 mile BEVs earning 1 credit each and 350 Mile FCVs earning 4 credits each. Allowed extended range BEVs (BEVx) which have a limited combustion engine range extender to meet up to half of a manufacturer's minimum ZEV requirement. The range of credit reflects the utility of the vehicle (i.e. the zero emitting miles it may travel) and its expected timing for commercialization. Simplified and streamlined TZEV credits based on the vehicle's zero-emission range capability, and their ability to perform at least 10 miles on the more aggressive US06 drive schedule. In addition to simplifying

the program, reducing the spread of credits makes the technologies more evenly treated and reduces the variation in compliance outcomes (numbers of vehicles produced to meet the regulation requirements).

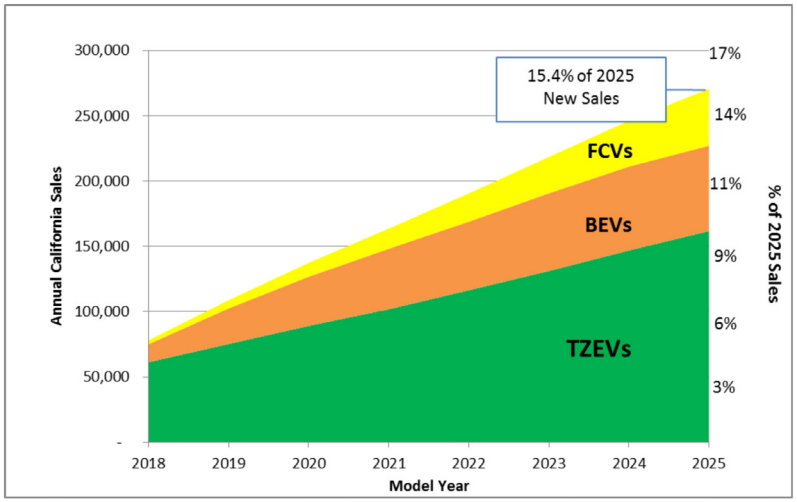
e. *Modified Travel Provision*: Ended the Travel Provision for BEVs after MY 2017. Extended the Travel Provision for FCVs until sufficient complementary polices are in place in states that have adopted the California ZEV regulation. This will allow FCV technology to continue to mature and provide time for Section 177 states to build infrastructure and put in place incentives to foster FCVs.

f. *Added GHG-ZEV Over-Compliance Credits*: Allows manufacturers who systematically over comply with the proposed LEV III GHG fleet standard to offset a portion of their ZEV requirement in 2018 through 2021 MYs only.

3. Effect of Amendments

As a result of the 2012 amendments, over 1.4 million ZEVs and TZEVs are expected to be produced cumulatively in California by 2025, with 500,000 of those vehicles being pure ZEVs (BEVs and FCVs) as represented in the top two wedges in the figure below.

Expected ZEV Regulation Compliance for 2018 through 2025 Model Years



During this timeframe, the incremental price of a ZEV or TZEV is expected to rapidly decline, yet remain higher than a conventional vehicle by approximately $10,000 (high-end estimate in 2025).

The 2012 amendments will also result in an emissions benefit as compared to the earlier ZEV regulations and will likely provide benefits beyond one achieved by complying with the LEV III criteria pollutant standard with conventional vehicles only. This is due to increased electricity and hydrogen use that is more than offset by decreased gasoline production and refinery emissions.

III. CALIFORNIA'S LOW EMISSION VEHICLE PROGRAM FOR LIGHT-DUTY VEHICLES

A. BACKGROUND

Despite significant progress in reducing smog-forming and particulate matter criteria emissions from the passenger vehicle fleet, California needs further reductions in order to meet State and federal ambient air quality standards. Additionally, climate change continues to pose a serious threat to the economic well-being, public health, natural resources, and environment of California. To address the challenge presented by climate change, vehicle GHG emissions must be drastically reduced to meet our state goal of an 80 percent reduction from 1990 levels by 2050. To address these issues, CARB adopted its LEV III program as described below.

1. Criteria Emissions

In 1990, CARB established the LEV program that contained the most stringent exhaust emission regulations ever for light-duty passenger cars and trucks. The regulations included three primary elements: 1) tiers of increasingly stringent exhaust emission standards; 2) a fleet-average emission requirement for 1994-2003 that required manufacturers to phase-in a progressively cleaner mix of vehicles from year to year; and 3) a requirement that a specified percentage of passenger cars and lighter light-duty trucks be ZEVs, vehicles with zero emissions of any pollutants. EPA granted CARB's associated waiver request on February 13, 1993.[11]

[11] 58 Fed.Reg. 4166 (January 13, 1993).

In 1999, CARB adopted the second phase of the LEV program. These amendments, known as LEV II, set more stringent fleet average non-methane organic gas (NMOG) requirements for MYs 2004-2010 for passenger cars and light-duty trucks and established a new more stringent super ultra-low emission vehicle (SULEV) standard. In addition, a partial zero-emission vehicle (PZEV) category was established for vehicles meeting the SULEV emission standard that also included extended 150,000-mile durability, zero fuel evaporative emissions, and extended emission warranty requirements. PZEVs could be used to meet a portion of the zero-emission vehicle requirement. The amendments also expanded the light-duty truck category to include trucks and sports utility vehicles (SUV) up to 8,500 lbs. gross vehicle weight rating (GVWR) and required these vehicles to meet the same emission standards as passenger cars and extended full useful life from 100,000 miles to 120,000 miles. The LEV II amendments also established more stringent emission standards for medium-duty vehicles (MDV) between 8,501-14,000 lbs. GVW. EPA granted CARB's associated waiver request on August 5, 1999.[12] EPA has also found that CARB's other amendments to the LEV program were either within the scope of previous waivers or qualified for a waiver on their own. EPA took final action on these waiver requests on April 22, 2003[13], April 28, 2005[14], and July 30, 2010.[15]

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[12] 64 Fed.Reg. 42689 (August 5, 1999).

[13] 68 Fed.Reg. 19811 (April 22, 2003).

[14] 70 Fed.Reg. 22034 (April 28, 2005).

[15] 75 Fed.Reg. 44951 (July 30, 2010).

2. Greenhouse Gas Emissions

Recognizing the increasing threat of climate change to the well-being of California's citizens and the environment, in 2002 the legislature adopted and the Governor signed Assembly Bill (AB) 1493 (Chapter 200, Statutes 2002, Pavley). AB 1493 directed CARB to adopt the maximum feasible and cost-effective reductions in GHG emissions from light-duty vehicles. Vehicle GHG emissions included carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O) that are emitted from the tailpipe, as well as emissions of HFC134a, the refrigerant then currently used in most vehicle air conditioning systems.

As directed by AB 1493, CARB adopted what is commonly referred to as the Pavley regulations, the first in the nation to require significant reductions of GHGs from motor vehicles. These regulations, covering the 2009-2016 and later MYs, call for a 17 percent overall reduction in climate change emissions from the light-duty fleet by 2020 and a 25 percent overall reduction by 2030. They also formed the foundation for the federal GHG program for light-duty vehicles for 2012-2016 MYs. EPA granted CARB's associated waiver request on July 8, 2009.[16]

After the Board adopted the Pavley regulations, the legislature adopted and the Governor signed AB 32, the California Global Warming Solutions Act (Chapter 488, Statutes 2006, Nuñez/Pavley). AB 32 charges CARB with the responsibility of monitoring, regulating, and reducing

[16] 74 Fed.Reg. 32744 (July 8, 2009).

GHG emissions in the State. AB 32 also directed CARB to prepare a Scoping Plan outlining the State's strategy to achieve the maximum feasible and cost-effective reductions in furtherance of reducing GHG emissions to 1990 levels by 2020. Measure T1 of the Scoping Plan anticipates an additional 3.8 million metric tons carbon dioxide equivalent ($MMTCO_2e$) reduction by 2020 from the subject regulatory amendments, beyond the GHG reductions arising from the 2009-2016 AB 1493 standards.

In addition, in 2005, in order to mitigate the long-term impacts of climate change, the Governor issued Executive Order S-3-05. Among other actions, the Executive Order called for reducing GHG emissions to 80 percent below 1990 levels by 2050. This ambitious yet achievable reduction path and goal are considered necessary to stabilize the long-term climate. The subject amendments' 2021-2025 MY requirements will further both AB 32 and the 2050 reduction goal.

As mentioned earlier, in 2010, President Barack Obama directed the EPA and NHTSA to work with California to develop GHG fleet standards for MY 2017 through 2025 LDVs.[17] The resulting jointly developed report concluded "electric drive vehicles including hybrid(s)… battery electric vehicles…plug-in hybrid(s)…and hydrogen fuel cell vehicles…can dramatically reduce petroleum consumption and GHG emissions compared to conventional technologies.... The future rate of

[17] http://www.whitehouse.gov/the-press-office/presidential-memorandum-regarding-fuel-efficiency-standards

penetration of these technologies into the vehicle fleet is not only related to future GHG and CAFE standards, but also to future reductions in HEV/PHEV/EV [electric vehicle] battery costs, [and] the overall performance and consumer demand for the advanced technologies…."[18] Following development of this report, NHTSA and EPA formally issued a Notice of Joint intent to develop strong greenhouse gas and fuel economy standards for the 2017 to 2025 timeframe,[19] and 14 automobile manufacturers have joined CARB in submitting letters to EPA committing to a continued national program of light-duty GHG and CAFÉ standards[20].

B. SUMMARY OF RECENT LEV III AMENDMENTS INCLUDING GHG COMPONENTS

In order to achieve further emission reductions from the light- and medium-duty fleet, CARB adopted several amendments that together represent a significant strengthening of the LEV program. Specifically, the criteria emission requirements of the program are made substantially more stringent, and the GHG requirements are restructured to provide for later acceptance of the

[18] EPA, 2010. United States Environmental Protection Agency, National Highway Safety and Traffic Administration and California Air Resources Board. September 2010. "Interim Joint Technical Assessment Report: Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards for Model Years 2017-2025" (p. vii).

[19] 76 Fed.Reg. 48758 (August 9, 2011).

[20] http://www.epa.gov/otaq/climate/letters.htm#2011al

EPA and National Highway Traffic Safety Administration (NHTSA) proposed 2017-2025 federal GHG emission and fuel economy standards for light-duty vehicles as compliance with CARB standards.[21] Effectively, these amendments will do the following:

Criteria Pollutants:

- Reduce fleet average emissions of new light-duty vehicles to SULEV levels by 2025, an approximate 75 percent reduction from 2010 levels;

- Replace separate NMOG and oxides of nitrogen (NOx) standards with combined NMOG plus NOx standards, in order to provide manufacturers with compliance flexibility to more cost-effectively meet SULEV emission levels across their light-duty fleets;

- Establish additional emission standard categories, such as ULEV70, ULEV50, and SULEV20 in order to provide additional options for compliance with the SULEV fleet average;

- Eliminate intermediate useful life (50,000 miles) standards;

- Increase full useful life durability requirements from 120,000 miles to 150,000 miles;

- Provide a backstop to help ensure continued production of SULEVs after PZEVs migrate

[21] CARB Resolution 12-11, January 26, 2012 (p. 6).

from the ZEV program to the LEV program in 2018. Without a backstop, beginning in 2018, manufacturers would not need to produce SULEVs until 2023 in order to meet the fleet average requirement;

- Establish more stringent emission requirements for MDVs;

- Require all MDVs between 8,501-10,000 lbs., GVWR to certify on a chassis dynamometer, which would greatly enhance the ability to perform in-use compliance evaluation of these vehicles;

- Establish more stringent 3 mg/mi and 1 mg/mi particulate matter (PM) standards for light-duty vehicles and more stringent PM standards for medium-duty vehicles;

- Establish zero fuel evaporative emission standards for light-duty vehicles, and more stringent evaporative emission standards for medium-, and heavy-duty vehicles;

- Establish more stringent supplemental federal test procedure (SFTP, reflecting more aggressive driving) standards for light-duty vehicles and, for the first time, require medium-duty vehicles to meet SFTP standards;

- Allow pooled fleet average NMOG plus NOx emissions from California and the federal CAA

Section 177 States that adopt the LEV III program; and

- Revise the NMOG Test Procedures.

Greenhouse Gases:

- Reduce new light-duty CO_2 emissions from new light-duty regulatory MY 2016 levels by approximately 34 percent by MY 2025, and from about 251 grams of CO_2 per mile to 166 grams, based on the projected mix of vehicles sold in California;

- Set emission standards for CO_2, CH_4, and N_2O;

- Establish footprint based CO_2 emission standards, as distinguished from the current California GHG requirement of a fleet average GHG standard. This will allow manufacturers' new vehicle fleet CO_2 emissions to fluctuate according to their car-truck composition and sales according to vehicle footprint and will align the requirement with current federal GHG requirements;

- Provide credits toward the CO_2 standard if a manufacturer reduces refrigerant emissions from the vehicle's air-conditioning system;

- Provide credits toward the ZEV standards if a manufacturer over complies with the LEV III GHG fleet requirement;

- Provide credits towards the CO_2 standards if a manufacturer produces full size pickups with high efficiency drivetrains;

- Provide credits for deployment of technologies that reduce off-cycle CO_2 emissions; and

- Unlike the proposed federal GHG program for 2017-2025, require upstream emissions from zero-emission vehicles to be counted towards a manufacturer's light-duty vehicle GHG emissions.

IV. WAIVER ANALYSIS

A. CRITERIA FOR DETERMINING WHETHER AMENDMENTS QUALIFY FOR A WAIVER OF PREEMPTION OR ARE WITHIN THE SCOPE OF PREVIOUS WAIVERS OF FEDERAL PREEMPTION

1. The Clean Air Act Section 209(b) Waiver Mechanism

CAA section 209(a) preempts states from adopting or enforcing any emission standard for new motor vehicles and from requiring certification, inspection, or any other approval relating to the control of emissions from any new motor vehicle as a condition of registration or titling in the states. However, section 209(b) directs the Administrator to waive federal preemption for new motor vehicle emission standards adopted and enforced by California[22]

[22] The section 209(b) waiver provisions apply to any state which has adopted standards (other than crankcase emission

if the State determines that the State standards will be, in the aggregate, at least as protective of public health and welfare as applicable federal standards. The Administrator is to deny a waiver on a finding: (1) that the protectiveness determination of the State is arbitrary and capricious, (2) that California does not need separate State standards to meet compelling and extraordinary conditions, or (3) that the State standards and accompanying enforcement procedures are not consistent with CAA section 202(a). With regard to the consistency criterion, the Administrator has stated that California's standards and accompanying test procedures are inconsistent with section 202(a) if: (1) there is inadequate lead time to permit the development of technology to meet those requirements, giving appropriate consideration to the cost of compliance within that timeframe, or (2) the federal and California test procedures impose inconsistent certification requirements so as to make manufacturers unable to meet both sets of requirements with the same vehicle.[23]

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standards) for the control of emissions from new motor vehicles or motor vehicle engines prior to March 30, 1966. (Clean Air Act §209(b)(1).) California is the only state that meets this condition. (S. Rep. No. 403, 90th Cong. 1st Sess., 532 (1967); *Motor and Equipment Manufacturers Ass'n v. EPA [MEMA I]*, 627 F.2d 1095, 1100 note 1 (D.C.Cir. 1979).).

[23] See, e.g., 46 Fed.Reg. 26371 (May 12, 1981). Even where there is incompatibility between the California and federal test procedures, EPA has granted a waiver under circumstances where EPA accepts a demonstration of federal compliance based on California test results, thus obviating the need for two separate tests. (43 Fed.Reg. 1829, 1830 (Jan. 12, 1978); 40 Fed.Reg. 30311, 30314 (July 18, 1975).).

For nearly 30 years, EPA has administered a mechanism under which, in appropriate cases, no new waiver is needed for amendments to California's motor vehicle emission control regulations for new motor vehicles because the amendments are within the

* * *

Consequently, the amendments do not materially affect the lead time provided to manufacturers under earlier iterations of the ZEV program, which EPA has found to be consistent with CAA section 202(a) in the 1993, 2006, and 2011 waivers.[61]

b. Test Procedure Consistency

The second prong of the consistency criteria requires that the federal and California test procedures not impose inconsistent certification requirements so as to make manufacturers unable to meet both sets of requirements with the same vehicle.[62] The test procedures for certifying ZEVs are contained in the ZEV Standards and Test Procedures documents incorporated by reference in sections 1962.1(h) and 1962.2(h).

The 2012 ZEV amendments primarily affect only the standards portions of the incorporated documents and hence do not generally change the pre-existing testing

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[61] 58 Fed.Reg. 4166 (Jan. 13, 1993), 71 Fed.Reg. 78190 (Dec. 28, 2006), 76 Fed.Reg. and 61095 (Oct. 3, 2011).

[62] *Id.*

requirements for certification. Accordingly, there also are no inconsistencies in the federal and California test procedures for PZEVs and AT PZEVs that would preclude a manufacturer from conducting one set of tests to demonstrate compliance or would prohibit a confirmation that the 2012 ZEV amendments are within the scope of 1993, 2006, and 2011 waivers.

2. New Issues Affecting Previous Waiver Determinations

CARB is not aware of any new issues affecting the previous waiver determinations that are raised by the 2012 ZEV amendments as they affect MYs 2009-2017.

E. THE 2012 ZEV AMENDMENTS TO THE REQUIREMENTS FOR 2018 AND LATER MODEL-YEAR VEHICLES ARE WITHIN THE SCOPE OF EXISTING WAIVERS FOR CALIFORNIA'S ZERO-EMISSION VEHICLE STANDARDS

1. Consideration of the Amendments Applicable to 2018 and Later Model-Year Vehicles as Within the Scope of Existing Waivers

In light of EPA's earlier decisions waiving preemption of the ZEV standards, the 2012 ZEV amendments are also within the scope of the previous waivers[63]

[63] 58 Fed.Reg. 4166 (January 13, 1993) and 71 Fed.Reg. 78190 (Dec. 28, 2006), and , and 76 Fed.Reg. 61095 (Oct. 3, 2011).

as they apply to 2018 and later MY vehicles because the standards contained in the 2012 amendments are at least as protective as those in earlier versions of the waived ZEV standards.[64] In those earlier versions, manufacturers' 2018 and subsequent MY ZEV requirements were held at the same percentage each year, as shown in the table below.

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[64] There is one aspect of the 2012 ZEV amendments as applied to MYs 2018 and later that opponents could argue is not within the scope of earlier waivers. Specifically, there is a group of current IVMs that will become subject to LVM requirements in 2018, due to the 2012 amendments to the definition thresholds. Some of these current IVMs are closer to becoming an LVM under the current definition of 60,000 vehicles sold, and others will only become an LVM due to the amended definition changes. The purpose of the 2012 amendments is to bring a larger percentage of manufacturers under the full ZEV requirements. This amendment to the lead time provision ensures a level playing field, making manufacturers close to the current definition thresholds (60,000 vehicles per year), subject to LVM requirements at the same time as manufacturers affected by staff's proposed definition change. CARB agrees that this aspect of the 2012 ZEV amendments can be analyzed as qualifying for a new waiver as detailed in the alternative analysis below in section IV. F.

2018 and Subsequent ZEV Credit Requirement *Before* 2012 Amendments

Credit Category	Credit Requirement
Minimum ZEV	5.0%
Maximum TZEV*	3.0%
Maximum AT PZEV*	2.0%
Maximum PZEV	6.0%
Total ZEV Requirement	16.0%

* The regulation did not specify the split between TZEVs and AT PZEVs. For this analysis, staff assumed AT PZEV and TZEV credit requirements would remain the same from the 2015 through 2017 requirements. The PZEV and AT PZEVs (highlighted in grey) were moved to the LEV III program so the remaining ZEV requirement under the current regulation would be 8 percent.

To address one of the program's primary objectives (i.e. ZEV technology commercialization and long-term GHG and criteria emission goals), CARB's 2012 ZEV amendments increased each manufacturer's compliance requirements for 2018 and subsequent MYs, ultimately reaching credit requirements of 6 percent for TZEVs and 16 percent for pure ZEVs in 2025. This increase is outlined in the table below.

ZEV Credit Requirement for 2018 and Subsequent *After* 2012 Amendments

Model Year	2018	2019	2020	2021	2022	2023	2024	2025 and Subsequent
Overall ZEV Requirement	4.50%	7.00%	9.50%	12.00%	14.50%	17.00%	19.50%	22.00%
Min. ZEV	2.00%	4.00%	6.00%	8.00%	10.00%	12.00%	14.00%	16.00%
Max. TZEV	2.50%	3.00%	3.50%	4.00%	4.50%	5.00%	5.50%	6.00%

As shown in the post-2012 Amendment table above, while the overall ZEV credit requirement between MY 2018 and MY 2022 is less than the current program, CARB has revised the number of credits earned per vehicle (typically by one half), and PZEVs and AT PZEVs no longer count towards meeting a manufacturer's ZEV obligation. Accordingly, it is more illustrative to compare the actual number of ZEVs required to be produced given the current and proposed crediting structure. This is shown in the figure below.

Excerpts from Comment Submitted by the State of California et al., R-133, EPA-HQ-OAR-2021-0257-0132 (July 6, 2021)

COMMENTS OF STATES AND CITIES
IN SUPPORT OF EPA REVERSING ITS
SAFE 1 ACTIONS

July 6, 2021

Docket ID No. EPA–HQ–OAR–2021–0257
via www.regulations.gov

INTRODUCTION

The State of California, by and through the California Air Resources Board (CARB) and California Attorney General Rob Bonta, along with the undersigned States and cities submit these comments in response to EPA's Notice of Reconsideration (86 Fed. Reg. 22,421 (Apr. 28, 2021)) concerning the actions EPA took in "SAFE 1" (84 Fed. Reg. 51,310 (Sept. 27, 2019)). We welcome EPA's reconsideration of its SAFE 1 actions and the opportunity to comment.

We urge EPA to reverse both actions it took in SAFE 1: 1) the withdrawal of the portions of the 2013 waiver covering California's greenhouse gas (GHG) and zero-emission-vehicle (ZEV) standards (Waiver Withdrawal) and 2) the conclusion that Section 177 of the Clean Air Act does not authorize other States to adopt California's GHG standards (Section 177 Determination). Both actions were unprecedented, unlawful, and ill-advised. Moreover, both actions were entirely unnecessary and upset long-settled reliance interests, including EPA-approved

State Implementation Plans (SIPs) to meet National Ambient Air Quality Standards (NAAQS). In fact, many of the undersigned States are depending on emissions reductions from these standards to protect their residents and natural resources from multiple forms of harmful pollution, including smog, particulate matter, and the GHGs that are causing the growing climate change crisis. As discussed below, there are multiple grounds on which EPA can and should reverse its SAFE 1 actions.

1. EPA can and should reverse both its Waiver Withdrawal and its Section 177 Determination because those actions will increase harmful criteria pollution and have already, at a minimum, cast a cloud of uncertainty over approved SIPs. Nothing compelled EPA to take these actions, and EPA should not have taken discretionary actions that undermined public health protections and SIPs. Indeed, Congress has expressly prohibited federal agencies, including EPA, from taking actions that interfere with—or do not "conform" with—approved SIPs. EPA itself maintained throughout SAFE 1 that reducing criteria pollution and attaining and maintaining NAAQS is central to the Clean Air Act, generally, and Sections 209(b)(1) and 177, specifically. Yet, EPA nonetheless expressly opted to ignore its own prior findings concerning the criteria benefits of GHG and ZEV standards (including its approval of multiple SIPs containing those standards). EPA's disregard for the record was a clear violation of reasoned decision-making requirements, was inconsistent with its own assertions about the importance of reducing criteria pollution, and contravened the spirit (and letter) of the Clean Air Act's general conformity requirements. EPA can and should reverse its unnecessary SAFE 1 actions

to correct those errors and restore the public health protections California's GHG and ZEV standards provide. And it may do so without regard to the conclusions it reaches on any of the other, alternative grounds discussed below.

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Indeed, EPA found that CARB had "reasonably refute[d]" the contrary claim—that its ZEV standard would produce no criteria emission benefits. 78 Fed. Reg. at 2,125.[7]

EPA confirmed the ZEV standard's role in reducing criteria pollution yet again when it approved that standard into California's and other States' SIPs. 81 Fed. Reg. 39,424, 39,425 (June 16, 2016) (California).[8] EPA acknowledged this in SAFE 1: "EPA reviewed [and approved] California's SIP submission, including ZEV measures, *as a matter of NAAQS compliance strategy*." 84 Fed. Reg. at 51,337 (emphasis added). Similarly, EPA has approved CARB's EMission FACtor (EMFAC) emission inventory model as a tool to estimate emissions and develop implementation plans to attain the NAAQS. *See* 80 Fed. Reg. 77,337 (Dec.

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[7] Congress, too, has recognized that ZEVs and California's ZEV standards reduce criteria pollution. 42 U.S.C. § 7586(f) (authorizing credits for zero-emission vehicles, defined "as closely as possible" as in "standards which are established by the State of California," as part of state plans to attain criteria-pollution standards).

[8] *See also* 82 Fed. Reg. 42,233, 42,235 (Sept. 7, 2017) (Maine); 80 Fed. Reg. 40,917, 40,920 (Jul. 14, 2015) (Maryland); 80 Fed. Reg. 13,768, 13,769 (Mar. 17, 2015) (Connecticut).

14, 2015) (EMFAC2014 approval); 84 Fed. Reg. 41,717 (Aug. 15, 2019) (EMFAC2017 approval). Both EMFAC2014 and EMFAC2017 reflect the emission benefits of CARB's motor vehicle pollution control program, including its GHG and ZEV standards. EPA's approval of these models is further indication that EPA recognizes the emission reductions benefits of these programs.

In SAFE 1, EPA identified no record evidence that would support reversing its prior conclusions. And, in fact, CARB's comments in the SAFE 1 proceeding confirmed that EPA's prior findings were correct: that the ZEV standard reduces criteria pollution. For example, CARB modeled the consequences of the actions proposed in SAFE, which included withdrawing California's waiver for its GHG and ZEV standards and freezing the federal GHG standards at MY 2020 levels. CARB concluded those actions, which would eliminate California's ZEV and GHG standards and leave in place only federal GHG standards at MY 2020 levels, would increase NOx emissions in the South Coast air basin alone by 1.24 tons per day. CARB SAFE Comments at 288, 308. While that figure combined the effects of replacing both California standards with a weaker federal standard, it nonetheless demonstrated that invalidating the state standards would have adverse criteria pollution consequences—including in the area of the country with the worst ozone challenges.

CARB's additional analysis submitted in this docket provides still more confirmation and documentation of the criteria pollution benefits of the ZEV standard. *See* Appendix A at 2–5 (estimating criteria pollution benefits of replacing conventional vehicles with ZEVs); Appendix B

at 11–15 (describing the importance of ZEVs for reducing pollution in overburdened communities).

2. The GHG Standard

EPA has also found that vehicular GHG emission standards reduce criteria pollutant emissions. For example, when it adopted its federal GHG standards for the same period at issue here (MY2017-2025), EPA found that those standards would reduce emissions of most criteria pollutants, including those, like VOCs and PM2.5, related to California's well-documented challenges with criteria pollution. 77 Fed. Reg. 62,624, 62,899 (Oct. 15, 2012). California's

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absent satisfaction of one of those three criteria (and it must), it cannot have *broader*, *implicit* authority to revoke such a grant on entirely different grounds.

Finally, any withdrawal authority EPA might have must be exercised consistent with the principles and precedents governing agency actions, generally, and reversals of informal adjudications, specifically.[12] As the constraints

[12] EPA has long maintained (including in in SAFE 1) that its waiver actions are informal adjudications. *E.g.*, 84 Fed. Reg. at 51,337 (SAFE 1); 74 Fed. Reg. at 32,781 ("EPA believes that its waiver proceedings and actions therein should be considered an informal adjudication…. EPA has been conducting its waiver proceedings in this manner for decades, and while Congress has amended provisions in section 209 on two separate

of Section 209(b)(1) itself indicate, Congress has not "countenance[d]" the "ill-conceived revisory power" EPA claimed in SAFE 1—where "[w]aivers granted after the statutorily-prescribed determination … would be open to revocation at any time, based on any evidence, subject to no substantive or procedural safeguards." *Am. Methyl Corp.*, 749 F.2d at 835. At a minimum, precedent requires 1) that reversals of informal adjudications occur within a reasonable time after the original decision (*id.*); 2) that the agency consider reliance interests that have attached to its original decision (*Chapman v. El Paso Nat. Gas Co.*, 204 F.2d 46, 53–54 (D.C. Cir. 1953); *DHS v. Regents of the Univ. of California*, 140 S. Ct. 1891, 1914 (2020)); and 3) that the reversal is not for "the sole purpose of applying some … change in administrative policy" (*Chapman*, 204 F.2d at 53–54.; *see also United States v. Seatrain Lines Inc.*, 329 U.S. 424, 429 (1947)).[13] EPA's Waiver Withdrawal violated each and every one of these principles.

1. By any measure, six years was too long a delay for EPA's reconsideration to be lawful. That period was well beyond the "weeks, not years" sometimes referenced as guidance for reasonableness. *Mazaleski v. Treusdell*, 562 F.2d 701, 720 (D.C. Cir. 1977). Likewise, the period for seeking judicial review had long ago run, *Am. Methyl*

occasions, Congress has not chosen to alter EPA's administrative requirements. Instead, Congress has expressed support for EPA's practice in applying and interpreting section 209(b).").

[13] Some statutes may also grant agencies the authority to correct ministerial errors in their original adjudications. *See Am. Trucking Ass'ns v. Frisco Transp. Co.*, 358 U.S. 133, 145 (1958). EPA's SAFE 1 action was not a correction of a ministerial error, nor did EPA claim that it was.

Corp., 749 F.2d at 835, and, in fact, no one had sought that review.

2. EPA refused to consider the reliance interests that had attached to its 2013 Waiver Grant. At the time EPA proposed SAFE 1, twelve other States had relied on EPA's 2013 Waiver Grant and adopted one or both of the California standards as their own. Multi-State SAFE Comments at 130. California and those Section 177 States further relied on the 2013 Waiver Grant in developing their long-term plans to control various forms of air pollution—including plans to reach state GHG and air quality targets as well as SIPs to attain or maintain compliance with NAAQS. *Id.* at 131.

These reliance interests are weighty. *See Ctr. for Sustainable Economy v. Jewell*, 779 F.3d 588, 595 (D.C. Cir. 2015) (describing as "important" state and local governments' reliance interests in "long-term plans" based on federal agency actions). The Clean Air Act and long-standing Executive branch policy both place substantial importance on States' interests in implementing the plans and laws they have determined best meet the needs of their States. *E.g.*, 42 U.S.C. §§ 7401(a)(3), (a)(4), (b)(3), 7416; 64 Fed. Reg. 43,255 (Aug. 10, 1999) (E.O. 13132). And, at bottom, the States' interests here are in protecting their residents and natural resources from harm, precisely as the Clean Air Act intends. *E.g.*, 42 U.S.C. §§ 7401(c), 7506. Moreover, because achievement of the NAAQS and many other air pollution goals requires long-term plans that often cannot change easily or quickly, upending those plans causes serious disruptions that could require years

of additional state planning (and attendant expenditures of state resources) and could result in the imposition of unexpected regulatory burdens on various parties to ensure the achievement of public health and welfare objectives. And, as EPA well knows, States face serious consequences for not achieving NAAQS goals, only enhancing the significance of reliance interests here for States relying on California's GHG and ZEV standards as part of their plans to achieve those goals. Other parties, including industry groups, also identified significant reliance interests, including sizable investments and their own long-range planning, in California's standards. Yet, EPA gave these reasonable, explained, and serious reliance interests no weight at all.

Instead, EPA asserted that no reliance interests could reasonably attach to the 2013 Waiver Grant because EPA had agreed, in 2012, to conduct a Mid-Term Evaluation of its own *federal* GHG standards. 84 Fed. Reg. at 51,335. The mere fact that an agency *might* change its standards in the future is insufficient to undercut reliance interests in already promulgated standards. To conclude otherwise would suggest that no reliance interests in regulations are reasonable given that, as EPA itself forcefully asserted in SAFE 1, agencies can generally reconsider their own regulations for prospective application. *See* 84 Fed. Reg. at 51,333. Indeed, the requirement that agencies "provide a more detailed justification" when replacing a "prior policy [that] has engendered serious reliance interests" demonstrates that substantial and reasonable reliance interests can attach to policies that are subject to change. *See Fox Television*, 556 U.S. at 515. But, even accepting

arguendo that EPA's Mid-Term Evaluation commitment could undercut the reasonableness of reliance on the *federal* standards adopted in 2012, that commitment would remain immaterial to reliance on *California's* separate standards.

Notably, EPA pointed to no "express limitations," *Regents of the Univ. of California*, 140 S. Ct. at 1914, or anything else that would have provided "explicit notice" that EPA might reconsider that waiver decision as part of EPA's Mid-Term Evaluation or otherwise, *Solenex LLC v. Bernhardt*, 962 F.3d 520, 528 (D.C. Cir. 2020). EPA's Mid-Term Evaluation regulation speaks only of the *federal* standards and nowhere mentions *California's*. 40 C.F.R. § 86.1818–12(h). Given that EPA had never before withdrawn a waiver in more than fifty years of waiver practice, the absence of any indication from EPA that this particular waiver was unsettled speaks volumes.[14] Moreover, EPA entirely failed to consider the self-evident state (and state resident) reliance interests in EPA-approved State Implementation Plans containing one or both of these California standards, going so far as to indefinitely postpone this consideration. 84 Fed. Reg. at 51,338 n.256. This failure is particularly noteworthy given Congress's clear indication that it shares the interests of these States in the ongoing validity and effectiveness

[14] CARB's inclusion of a "deemed-to-comply" provision, under which CARB would accept compliance with EPA's GHG standards as compliance with California's GHG standards, does not aid EPA's contention. *See* 84 Fed. Reg. at 51,335. As California made clear at the time it adopted that provision, acceptance of federal compliance was conditioned on the federal standards "provid[ing] equivalent or better overall greenhouse gas reductions in the state compared

of their approved SIPs, such that federal agencies are prohibited from undercutting those plans. 42 U.S.C. § 7506(c)(1). EPA's rejection of the substantial reliance interests in the 2013 Waiver was unjustified. And EPA's failure to adequately consider those interests—including its failure to determine that they were outweighed by some (unidentified) need to take this action—renders its action unlawful. *Chapman*, 204 F.2d at 54; *Regents of the Univ. of California*, 140 S. Ct. at 1914.

3. EPA chose to *sua sponte* reconsider its 2013 Waiver Grant for the sole purpose of applying new policy determinations, as reflected in the two bases for the Waiver Withdrawal. EPA chose, for the first time, to rely on NHTSA's views of EPCA preemption and its Preemption Rule. EPA also chose to depart from its long-standing interpretations of Section 209(b)(1)(B), to adopt new interpretations that served only to categorically bar state standards that reduce vehicular GHG emissions, and to apply those new interpretations to a six-year-old, settled decision. EPA thus acted for "the sole purpose of applying some … change in administrative policy," *Chapman*, 204

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to California's program." CARB Initial Statement of Reasons to Consider Proposed Amendments to the LEV III GHG Emission Regulation at 6 ("DTC Clarification ISOR"); *see also infra* at 57 (Section VI.A.1). The "deemed-to-comply" provision did not, then, undercut California's reliance interests in the emissions benefits of its own standards because, as EPA noted in 2013, California always intended its standards would "remain an important backstop in the event the national program is weakened or terminated." 78 Fed. Reg. at 2,128. Moreover, that provision only applies to the GHG standard, and EPA never attempted to explain how its Mid-Term Evaluation commitment or the "deemed-to-comply" provision undercut reliance interests in the ZEV standard.

F.2d at 53–54, and neither precedent nor some implicit power in Section 209(b)(1) authorized it to do so.

EPA lacked authority for its Waiver Withdrawal, even if it has some withdrawal authority, because this action flouted every constraint on an agency's authority to reconsider a settled adjudication. EPA should reverse its *ultra vires* action.

III. EPA Should Reverse Its Decision To Rely On NHTSA's Preemption Rule And Reinstate The Waiver For Model Years 2017-2020

EPA should reverse its decision to rely on NHTSA's Preemption Rule as a basis for a Waiver Withdrawal. We note that NHTSA has proposed to repeal its unlawful and unwarranted Preemption Rule. But, regardless of whether NHTSA finalizes that repeal, EPA should reverse its decision to rely on NHTSA's Rule.

In its Notice, EPA asked whether "EPA has the authority to withdraw an existing waiver based on a new action that is beyond the scope of section 209 of the CAA." 86 Fed. Reg. at 22,429. As discussed above, the answer is no. Whatever reconsideration authority EPA may have (*but see supra* at 16), EPA may not reconsider a settled waiver grant simply because the agency has changed its mind on policy matters, *supra* at 19, and particularly cannot do so when the result upends weighty reliance interests and EPA-approved SIPs, *supra* at 17. EPA's decision to look outside the three Section 209(b)(1) criteria—for the first time—was precisely the kind of policy

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problem," *and* "offered an explanation for its decision that … is so implausible that it could not be ascribed to a difference in view or the product of agency expertise." *State Farm*, 463 U.S. at 43. This reversal requires restoration of the withdrawn portions of the 2013 waiver for model years 2017-2020, if, as the agency asserted in the D.C. Circuit, it withdrew the waiver for those years. EPA's reliance on NHTSA's Preemption Rule was the sole basis of any withdrawal for those model years. 84 Fed. Reg. at 51,328 (withdrawing only for MY2021–2025 on Section 209(b)(1)(B) grounds). Confirming that the waiver is in effect for those model years would have the added advantage of correcting the legal error EPA made when it purported to expand the scope of the Waiver Withdrawal to include those model years without any notice.[15] We appreciate EPA granting California's petition for reconsideration or clarification on that issue, and encourage EPA to reverse course.

Finally, there are no reasonable reliance interests that could outweigh the stability and clarity that would result from a return to EPA's consistent long-standing approach of limiting review to the Section 209(b)(1) criteria or the correction of EPA's error in failing to justify its one-time change in course. As discussed above, there are no reasonable reliance interests in any parts of the Waiver Withdrawal. *See supra* at 15. In addition, no automaker (or party affected by automaker compliance) could have reasonable reliance interests in the withdrawal of a

[15] *See* Petition for Clarification and Reconsideration submitted by CARB and the California Attorney General (October 9, 2019).

preemption waiver for standards governing periods that were already past or well underway when the withdrawal occurred. And, in any event, the automakers have complied with, and often over-complied with, model years 2017-2020 already and are projected to be able to comply easily with the remaining model years. Appendix D at 2 ("[T]he industry will enter the 2021 model year in compliance with California's [GHG] standards and, given the progression of technologies, are on a trajectory to continue to comply at or below previous cost projections."); Appendix E at 2 ("Since 2005, all auto manufacturers have complied with California's Zero Emission Vehicle (ZEV) Regulation, and all have collectively exceeded its requirements—and by increasing margins."), 4 (Figure 1) (showing significant over-compliance through MY 2019, the latest year for which data was available).

Moreover, restoration of the waiver for already-completed model years of the ZEV standard would actually serve the reliance interests of automakers. All of them hold credit balances now under California's ZEV program, Appendix E at 18 (Table 6, 2019); *see also id.* at 7 (Table 2), and those existing balances reflect credits issued for model years 2017 and later. If the waiver is not restored for those model years, the status of credits issued for those model years (and the automakers' credit balances) could become questionable.

Whatever force NHTSA's Preemption Rule had, and whatever NHTSA decides to do about that Rule, EPA should abandon its reliance on it and reverse the Waiver Withdrawal for model years 2017-2020.

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These recent unprecedented fire seasons, droughts, and the rising temperatures that help fuel them reaffirm that California's climate conditions are compelling and extraordinary and that EPA's conclusion to the contrary in SAFE 1 was arbitrary and capricious.

b. The record also demonstrates that California needs its GHG and ZEV standards now

The record also demonstrates 1) that California's GHG and ZEV standards effectively reduce greenhouse gas emissions now, 2) that these immediate emissions reductions are critical in avoiding climate "tipping points"—thresholds of abrupt and irreversible change—and 3) that the standards are necessary now to incentivize technological advancements essential to longer-term emission reductions. In SAFE 1, EPA failed to identify any contrary evidence that would undermine the inevitable conclusion that California needs these standards.

In erroneously concluding that California did not need its GHG and ZEV standards, EPA claimed California's standards would cause "indistinguishable change[s] in global temperatures." 84 Fed. Reg. at 51,341. That assertion rests on an inappropriately narrow construction of "need." *See supra* at 40. Indeed, if governments were limited to taking actions that would, by themselves, solve a particular problem, only the smallest of problems would ever be solvable. EPA's approach to "need" also ignores the incremental emission reductions that will result from California's GHG and ZEV standards as well as CARB's analysis in the record showing larger emissions impacts. CARB SAFE Comments at 57, 370; Waiver Request at 10,

16–17. Recently, CARB conducted another analysis of the emission reductions attributable to its GHG standards, confirming that these standards effectively reduce greenhouse gas emissions today and will increasingly do so in the future. Appendix C at 5–6, 9–11.

These incremental emissions reductions in greenhouse gas emissions are needed now because greenhouse gases can remain in the atmosphere for long time periods. Carbon dioxide in particular remains in the atmosphere longer than the other major greenhouse gases emitted as a result of human activities: once emitted, 40 percent will remain in the atmosphere after 100 years and 20 percent will reside after 1000 years; only after about 10,000 years will the remainder break down. As explained in the Fourth National Climate Assessment, "[w]aiting to begin reducing emissions is likely to increase the damages from climate-related extreme events (such as heat waves, droughts, wildfires, flash floods, and stronger storm surges due to higher sea levels and more powerful hurricanes)."[64]

Even moderate climate change could pose serious risks. For instance, there may be tipping points in the climate system such that even a small incremental change in temperature could push Earth's climate into catastrophic runaway global warming. Indeed, a recent commentary in the journal *Nature* warned that nine major climate tipping points (including the accelerating ice loss from the West Antarctic ice sheet) are "dangerously close" to

[64] U.S. Global Change Research Program, *Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II*, at 1488 (2018) (EPA-HQ-OAR-2018-0283-7447).

being triggered.[65] Therefore, serious efforts to reduce GHG emissions are needed now to avoid scenarios where steeper (and likely more expensive) emission reductions are needed later. Delaying efforts to mitigate carbon dioxide emissions will have negative—and potentially irreversible—consequences for global warming and its impacts, including more extreme wildfires, rising sea levels, greater ocean acidification, and increased risks to food security and public health.

Finally, California's regulations are critical not just for immediate emissions reductions but also because they incentivize technological advancement that facilitates greater emission reductions in the future. Waiver Request at 2, 4–5, 16–17; CARB SAFE Comments at 373. Notably, in SAFE 1, EPA did not contest that California's GHG and ZEV standards are critical for incentivizing production and deployment of zero-emission vehicles, reducing greenhouse gas emissions, and achieving California's long-term greenhouse gas emission reduction goals. 84 Fed. Reg. at 51,337. Nor could it, given CARB's demonstration in its 2012 waiver request and the confirmation provided by the remainder of the record. *See, e.g.*, Waiver Request at 2–3, 8–9, 16–17; CARB Board Resolution 12-11.

In SAFE 1, EPA inappropriately narrowed its interpretation of "need" to exclude the incremental emission reductions from California's GHG and

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[65] Timothy M. Lenton, et al., *Comment: Climate Tipping Points—Too Risky to Bet Against*, NATURE (Apr. 9, 2020), https://www.nature.com/articles/d41586-019-03595-0.

ZEV standards. EPA's SAFE 1 Section 209(b)(1)(B) Determination should be reversed on this additional ground: because this unjustified change in interpretation was unlawful, as explained above, and because the record firmly indicates that California does need these standards to reduce its contribution to its climate crisis,.

V. EPA Should Withdraw Its Section 177 Determination

In Section 177 of the Clean Air Act, Congress conferred directly on States the discretionary authority to adopt California motor vehicle emission standards, so long as: 1) the States' standards are identical to standards for which California has been granted a waiver by EPA; and 2) the States provide two years of lead time. 42 U.S.C. § 7507. This authority belongs exclusively to States, with no intermediary role for EPA. As the agency has long acknowledged: "States are not required to seek EPA approval under the terms of section 177."[66] The one prerequisite for a State to avail itself of Section 177 is that the State must have "plan provisions approved under" Part D of Subchapter I of the Act. *Id.*

Thirteen States have adopted California's light-duty vehicle GHG emission standards pursuant to Section 177, and many have been implementing these GHG standards for up to a decade. These standards play an important role in State's planning for reaching their GHG emission

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[66] https://www.epa.gov/state-and-local-transportation/vehicle-emissions-california-waivers-and-authorizations#state

reduction targets and mandates[67] as well as in planning for attainment of NAAQS, which States face legal

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[67] For example, in 2019, New York State adopted the Climate Leadership and Community Protection Act, which mandates an 85% reduction in GHG emissions in New York by 2050. New York Environmental Conservation Law, Article 75. In 2021, Massachusetts enacted new climate change legislation that mandates the Commonwealth achieve net-zero economywide greenhouse gas emissions by 2050, with interim milestones in 2030 and 2040 and a requirement to adopt sector-specific greenhouse gas emissions sublimits, including for the transportation sector. 2021 Mass. Acts Ch. 8. §§ 8–10. In 2007 New Jersey's legislature passed, and in 2018 modified, the Global Warming Response Act which mandates an 80% reduction in greenhouse

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Appendix A

State of California
Air Resources Board

Criteria Pollutant Emission Reductions from California's Zero-Emission Vehicle Standards for Model Years 2017-2025

Staff Report

Date of Release: July 6, 2021

This report has been prepared by the staff of the California Air Resources Board and approved by the Executive Officer for publication. At this time, this report has not been approved by a vote of the Board itself, and, accordingly, the views expressed herein should not be assumed to necessarily reflect those of the Board. In addition, the use of trade names or commercial products herein does not constitute endorsement or recommendation.

Summary

California has adopted requirements for zero-emission passenger vehicles for model years 2017-2025 as part of its Advanced Clean Cars (ACC) program. CARB analyzed three scenarios to estimate the emission benefits of these requirements:

- Estimates using the most recent version of CARB's emission inventory tool, EMFAC2021, that uses the most recent data and ZEV forecasting tools;

- Estimates using EMFAC2017, the version of CARB's emission inventory tool that U.S. EPA has approved for transportation and air quality planning under the Clean Air Act; and

- Estimates using EMFAC 2021 that estimate the benefits of manufacturer statements and California's policy directives to transition new passenger car and light-truck sales to zero-emission vehicles (ZEVs) by 2035.

All these scenarios show significant reductions in air pollution from the transition to ZEV technology. CARB has shown, including in implementation plans required under the Clean Air Act and approved by the U.S. Environmental Protection Agency, that a transition towards requiring nearly all new passenger vehicles to be zero emission is critical to attaining health and climate standards. California's authority to reduce emissions from vehicles is critical to meeting public health standards, including the National Ambient Air Quality Standards. Public health will improve dramatically if emissions from transportation-related combustion are nearly eliminated, through the proper regulatory course and in a reasonable time considering the costs and advancement of technology.

Analysis

ZEV Benefits Based on EMFAC2021

The first analysis uses the current version of CARB's on-road emission modeling tool, EMFAC2021,[1] to estimate the emission benefits of the ZEV requirements. EMFAC2021 uses the best available data and forecasting tools. These include the most recent available California Department of Motor Vehicle (DMV) population data and an updated market share projection that reflects recent policy and industry developments.

As one way of estimating the emission benefits of CARB's ZEV regulation for calendar years 2021, 2030, and 2035, CARB calculated the emissions benefits of the ZEV vehicles required under that regulation to illustrate that required ZEV sales have

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[1] EMFAC is approved by U.S. EPA for planning required to meet the National Ambient Air Quality Standards. See 40 C.F.R. §§ 93.110, 93.111 ; 80 Fed.Reg. 77,337 (Dec. 14, 2014) [EMFAC2014 approval]; 84 Fed.Reg. 41,717 (Aug. 15, 2019) [EMFAC2017 approval]. EMFAC2021 is pending approval.

Appendix B

State of California
Air Resources Board

Benefits of California's Zero-Emission Vehicle Standards on Community-Scale Emission Impacts

Staff Report

Date of Release: July 6, 2021

This report has been prepared by the staff of the California Air Resources Board and approved by the Executive Officer for publication. At this time, this report has not been approved by a vote of the Board itself, and, accordingly, the views expressed herein should not be assumed to necessarily reflect those of the Board. In addition, the use of trade names or commercial products herein does not constitute endorsement or recommendation.

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emissions in the East LA/Boyle Heights/West Commerce community make up 58% of all NOx emissions, 29% of all VOC emissions, and 23% of all PM2.5 emissions.[11]

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[11] Community Emissions Reduction Plan for East Los Angeles, Boyle Heights, West Commerce, September 2019 http://www.aqmd.gov/docs/defau/t-source/ab-617-ab-134/steering-committees/east-la/cerp/carb-submittal/final-cerp.pdf?sfvrsn=8

Passenger light-and medium-duty vehicles emit most of the on-road TOG and PM2.5 emissions. Passenger light-and medium duty vehicles also emit nearly half of all NOx emissions from on-road vehicles. Figure 7 shows the relative contribution of passenger light-and medium-duty vehicle emissions as compared to all other vehicles in the East LA/Boyle Heights/West Commerce community. Passenger cars are the main source of TOG emissions because of the large number of vehicles and miles travelled by these types of vehicles in the community. PM2.5 emissions from on-road sources are from fuel combustion as well as from tire and brake wear. Light- and medium-duty vehicles are the main contributors to the total emissions of PM2.5, as these vehicles travel the most miles in the community.

Figure 8 shows the toxicity weighted emissions for the top 10 toxic air contaminants (TACs) with a cancer risk health value from passenger light- and medium-duty vehicles in the community.[12] Benzene and 1,3-butadiene contribute the most to the cancer risk weighted emissions

[12] One way to compare different toxic pollutants is to look at Toxicity Weighted Emissions (TWE). TWE are adjusted emissions for TACs that have OEHHA approved health values. They are calculated by multiplying the mass emissions of each TAC by the corresponding health values as determined by OEHHA, molecular weight adjustment factors accounting for the molecular weight fraction of a compound associated with the specific health effects, maximum hours of emissions, and normalization factors (these are factors that allow the conversion of different toxic pollutant emissions into a standard to help compare pollutants to one another). TWEs are not risks, but the weighted emissions are useful to compare the relative toxicity of TACs.

from these vehicles in the community. Reducing criteria pollutant and TAC emissions from passenger light- and medium-duty vehicles through the increased adoption of ZEVs could have a significant impact in reducing the air pollution burden on the community and substantial impact on overall health and well-being of people living and working there.

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Appendix C

State of California
Air Resources Board

Emission Benefits of California's Passenger Vehicle GHG Standards

Staff Report

Date of Release: July 2, 2021

This report has been prepared by the staff of the California Air Resources Board and approved by the Executive Officer for publication. At this time, this report has not been approved by a vote of the Board itself, and, accordingly, the views expressed herein should not be assumed to necessarily reflect those of the Board. In addition, the use of trade names or commercial products herein does not constitute endorsement or recommendation.

Summary

Staff at the California Air Resources Board (CARB) have estimated the emissions benefits of its passenger-vehicle greenhouse gas (GHG) emission standards.

Emissions from motor vehicle use may be comprehensively described as well-to-wheel, or WTW. These emissions are comprised of two components reflecting the production and use of fuel (well-to-tank or WIT) and from the use of

the vehicle (tank-to-wheel or TTW). TTW emissions are from the vehicle tailpipe as well as evaporative emissions from the vehicle's fuel system. These emissions are distinguished from the vehicle's WTT emissions, which are the proportionate emissions attributed to the vehicle from fuel extraction, processing and production, and distribution to refueling stations for consumers.

This analysis estimates the upstream (WTT), downstream (TTW), and total (WTW) criteria and GHG emission reductions from CARB's GHG emission standards for model years 2021-2025. These estimates are quantified for the years by when the South Coast air basin must meet the National Ambient Air Quality Standards (NAAQS) for ozone.

CARB estimated the emission benefits of its GHG standards for passenger vehicles using two versions of its emission inventory tool, EMFAC.[1] Under the first approach, CARB used EMFAC2017, which U.S. EPA has approved for use in transportation and air quality planning under the Clean Air Act. Under this approach, CARB's GHG standards will result in a statewide decrease in tons per year (tpy) and tons per day (tpd) of upstream oxides of nitrogen (NOx) emissions of:

- 67 fewer tons per year NOx, or 0.18 tons per day, in calendar year 2023

[1] EMFAC is approved by U.S. EPA for planning required to meet the National Ambient Air Quality Standards. See 40 C.F.R. §§ 93.110, 93.111; 84 Fed.Reg. 41,717 (Aug. 15, 2019) [EMFAC2017 approval]. EMFAC2021 is pending approval.

- 358 fewer tons per year NOx, or 1.03 tons per day, in calendar year 2031, and

- 483 fewer tons per year NOx, or 1.39 tons per day, in calendar year 2037.

Similarly, CARB's GHG standards for passenger vehicles will result in a statewide decrease in carbon dioxide equivalent (MMTCO2e) GHG emissions of:

- 1.6 million fewer metric tons in 2023,

- 8.4 million fewer metric tons in 2031, and

- 11.3 million fewer metric tons in 2037.

Using EMFAC2021, which incorporates the best available data and ZEV forecasting assumptions, CARB's GHG standards will result in a statewide decrease in tons per year (tpy) and tons per day (tpd) of upstream oxides of nitrogen (NOx) emissions of:

- 51 fewer tons per year NOx, or 0.15 tons per day, in calendar year 2023

- 297 fewer tons per year NOx, or 0.86 tons per day, in calendar year 2031, and

- 404 fewer tons per year NOx, or 1.16 tons per day, in calendar year 2037.

Similarly, CARB's GHG standards for passenger vehicles will result in a statewide decrease in carbon dioxide equivalent (MMTCO2e) GHG emissions of:

- 1.2 million fewer metric tons in 2023,
- 7.0 million fewer metric tons in 2031, and
- 9.5 million fewer metric tons in 2037.

Background of California's Passenger Vehicle GHG Standards

In 2002, California's Legislature found that "[g]lobal warming would impose on California, in particular, compelling and extraordinary impacts." These included poor air quality, more extreme wildfires, and agricultural damage. To address the root causes, the Legislature directed CARB to reduce motor vehicle greenhouse gas emissions, which comprised about 40 percent of state's total greenhouse gas pollution.[2]

CARB adopted its first greenhouse gas emission standards for passenger vehicles in 2005, codifying them in section 1961.1 of title 13 of the California Code of Regulations. U.S. EPA initially denied California's request for a waiver of federal preemption under Section 209 of the Clean Air Act for these standards.[3] Upon reconsideration, U.S.

[2] 2002 Cal. Stat. c. 200 (A.B. 1493) (Digest).

[3] 73 Fed. Reg. 12,156 (Mar. 6, 2008).

EPA granted the waiver.[4] EPA, NHTSA, and California subsequently created a harmonized "National Program" for regulating passenger vehicle greenhouse gas emissions and fuel-economy to maximize benefits and minimize costs.[5] Automakers supported the approach.[6] California included provisions under which manufacturers would be deemed to meet the State's GHG emission standards if they complied with EPA's roughly analogous federal standards.[7]

In 2013, U.S. EPA granted California a waiver for its Advanced Clean Cars program, which included GHG emission standards, criteria pollutant emission standards, and requirements for zero-emission vehicles, for model years 2017 and later.[8] The program also included the "deemed-to-comply" provision referenced above. That followed U.S. EPA's adoption, in 2012, of federal GHG emission standards analogous to California's and harmonized with NHTSA's fuel economy standards.

In 2018, U.S. EPA and NHTSA proposed to end this harmonized national program through the "Safer

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[4] 74 Fed. Reg. 32,744 (July 8, 2009).

[5] 75 Fed. Reg. 25,324, 25,545 (May 7, 2010).

[6] *Id.* at 25,328.

[7] Cal. Code. Regs. tit. 13, §§ 1961.1(a)(1)(A)(ii) [compliance option for model years 2012-2016], 1961.3(c) [compliance option for model years 2017-2025].

[8] 78 Fed. Reg. 2,112 (Jan. 9, 2013).

Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks."[9] In 2020, U.S. EPA and NHTSA finalized a portion of this proposal and issued the "Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks" (Final SAFE 2 Rule).[10] In those final rules, U.S. EPA and NHTSA set improperly lax federal GHG emission and Corporate Average Fuel Economy standards that increase in stringency at only about 1.5 percent (%) per year from model year (MY) 2020 levels over MYs 2021-2026. The previously established federal GHG emission standards and related "augural" fuel economy standards would have achieved about 5% per year improvements through MY 2025.

If left in place, the federal GHG emission standards will dramatically increase emissions compared to the previous set of standards. California's "deemed to comply" provision was never intended to allow for that in California, and California does not accept compliance with the improperly relaxed federal standards as equivalent to compliance with its own standards under the "deemed to comply" provision. The analysis here summarizes CARB staff's assessment of both the criteria pollutant and GHG emissions benefits of CARB's GHG emission standards for model years 2021-2025. These benefits are from both the upstream (WIT) and downstream (TTW) reduced GHG and criteria emissions from CARB's standards.

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[9] 83 Fed. Reg. 42,986 (Aug. 24, 2018).

[10] 85 Fed. Reg. 24,174 (Apr. 30, 2020).

This assessment models the impacts of the standards themselves. This assessment does not account for the Framework Agreements in which, given the SAFE rulemaking and resulting ongoing litigation, CARB entered agreements with various forward-thinking manufacturers which required those manufacturers to take specific actions that would result in fewer emissions than direct compliance with California's GHG standards. These agreements do not change the underlying standards.

Analysis

Tank-to-Wheel (TTW) Emissions Impact

CARB estimated the change in TTW (or downstream vehicle tailpipe and evaporative) emissions of the California light-duty vehicle fleet using its EMission FACtor 2017 (EMFAC2017) model.[11] EMFAC2017 is the latest U.S. EPA-approved version of California's on-road mobile source emission inventory model. It reflects California-specific driving and environmental conditions, fleet mix, and most importantly the impact of California's unique mobile source regulations. These include the Low-Emission Vehicle (LEV) program, the LEV II and LEV III standards, California inspection and maintenance programs, and in-use diesel fleet rules. The EMFAC model supports CARB's regulatory and air quality planning efforts and fulfills the federal Clean Air Act and

[11] EMFAC2017, EMFAC2021and other versions of CARB's emission models are available at: https://ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/msei-modeling-tools

the Federal Highway Administration's transportation planning requirements. The U.S. EPA has approved EMFAC2017 for use in state implementation plan (SIP) and transportation conformity analyses.[12]

The EMFAC2017 default model, with an "annual average" setting, was run to estimate statewide vehicle emissions by calendar year, vehicle category, fuel type, and model year projected to occur under the existing Federal and CARB GHG standards.

In addition, CARB also estimated emission benefits using the latest version of the EMFAC model, EMFAC2021, to consider the best available information and most current data. These results are presented in Tables 4 to 6. EMFAC2021 provides an updated estimate of ZEV populations in California, which are higher than predicted by EMFAC2017. The 2021 model, like the 2017 model, is based on CARB's Advanced Clean Cars regulations but also considers updated California Department of Motor Vehicles data through calendar year 2019 and improved projections of the ZEV market share to forecast future ZEV population. EMFAC2021 is not yet approved by U.S. EPA for use in SIP and transportation conformity analyses.

These projections recognize California's policies to transition to clean transportation technology. On September 23, 2020, California Governor Newsom issued Executive Order N-79-20 that set a goal for all

[12] 84 Fed. Reg. 41,717 (Aug. 15, 2019).

new passenger car and truck sales in the state to be zero-emission by 2035 and directed CARB to consider regulations to reach this goal. CARB staff are developing the Advanced Clean Cars II (ACC II) program that will focus on post-2025 model year light-duty vehicles.

Fully transitioning to zero-emission passenger vehicles is expected to significantly reduce emissions. For instance, according to staff analysis presented in the Revised Draft of the 2020 Mobile Source Strategy,[13] meeting the ZEV targets set by the Governor's executive order combined with more stringent GHG standards[14] for internal combustion engine vehicles and VMT reduction[15] strategies can

[13] https://ww2.arb.ca.gov/sites/default/files/2021-04/Revised_Draft_2020_Mobile_Source_Strategy.pdf

[14] The light duty vehicle scenario of the 2020 Mobile Source Strategy assumes that GHG emissions of new gasoline-only vehicles, including hybrids (non-plugged vehicles), will be reduced by 2.0% per year from 2026 to 2035. This assumption reflects an investment by the automotive industry in ongoing conventional vehicle improvements while focusing most investments on ZEVs, and likely would require a regulatory change to California's vehicle standards. More details are provided on pages 86 through 88 of the Revised Draft 2020 Mobile Source Strategy.

[15] The light duty vehicle scenario of the 2020 Mobile Source Strategy assumes a 15% reduction in statewide light-duty VMT by 2050 compared to business-as-usual assumption, the same as the 2016 Mobile Source Strategy and the 2017 Scoping Plan. The VMT reduction strategy areas discussed in this document reflect the nature of the actions necessary to achieve the level of reductions in the scenario. More details are provided on pages 99 through 120 of the Revised Draft 2020 Mobile Source Strategy.

reduce GHG emissions associated with passenger vehicles by more than 80% in 2045 below the 2045 baseline and beyond what would otherwise be expected with current programs absent the zero-emission executive order and other upcoming measures[16]. Additionally, the 2020 Mobile Source Strategy shows that fully transitioning to ZEVs can generate a 17% reduction in NOx emissions in 2031 and a 43% reduction in 2037 relative to baseline projections of tailpipe emissions Statewide for each of those years. More details are provided in Chapter 6 of the Revised Draft of the 2020 Mobile Source Strategy.

Well-to-Tank (WTT) Emissions Impact

For WTT, or upstream, emission impacts, CARB's analysis calculated the emissions reductions that would result from the avoided production and delivery of gasoline, and the increased emissions from increased production of electricity and hydrogen to fuel ZEVs that can be part of an automakers' compliance with the GHG standards. Though both of these categories of emissions impacts could be attributed to the ZEV standard to the extent the impacts are tied to ZEV sales, a substantial portion of the benefits estimated herein would nonetheless remain for the GHG standard given that ZEVs constitute a relatively modest (but growing) percentage of the fleet sold in California.

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[16] This is equivalent to an 87% reduction in well-to-wheel GHG emissions in 2045 below 2020 levels. See Revised Draft 2020 Mobile Source Strategy, p. 89.

To calculate these values, staff used the following analyses and data previously developed or relied upon for CARB's vehicle emission standards:

1. VMT by ZEV were divided into miles driven by battery electric vehicles (BEVs) and fuel cell electric vehicles (FCEVs) based on the technology splits projected in the Mid-Range Scenario of CARB's Advanced Clean Cars Midterm Review.[17]

2. Vehicle electricity and hydrogen consumption was estimated by applying the average vehicle efficiencies for BEVs and FCEVs developed in CARB's Vision scenario modeling framework.[18]

3. Upstream emission factors associated with fuel and energy production for gasoline, electricity, and hydrogen were based on the best available California-specific data when possible. Data sources for criteria emission factors included the California Emission Inventory Development and Reporting System (CEIDARS) from CARB, annual power generation by plant unit reported by the Energy Commission, facility nameplate capacities and utilization rates, Renewable

[17] https://ww2.arb.ca.gov/sites/default/files/2020-01/appendix_a_minimum_zev_regulation_compliance_scenarios_formatted_ac.pdf

[18] https://ww2.arb.ca.gov/sites/default/files/2020-06/vision2.1_scenario_modeling_system_general_documentation.pdf, Appendix B

Portfolio Standards (RPS), and Argonne National Laboratory's study on refinery products' contributions to facility emissions. Staff used CA GREET 3.0 to develop the GHG emission factors by fuel/energy type and estimated GHG emissions changes within California for gasoline and hydrogen, and globally for electricity. These sources are summarized below.

The California Emissions Inventory Data Analysis and Reporting System (CEIDARS) is a database management system developed to track statewide criteria pollutant and air toxic emissions. The database includes emissions from stationary point sources that can be identified by locations and are often permitted by local Air Quality Management Districts and Air Pollution Control Districts (Districts). Examples of stationary sources include facility point sources, such as power plants and oil refineries. See *Criteria Pollutant Emission Inventory Data I California Air Resources Board* and https://ww3.arb.ca.gov/ei/dreilmaintain/database.htm.

The statistics presented in the Annual Generation–Plant Unit are derived from the Quarterly Fuel and Energy Report (QFER) CEC-1304 Power Plant Owner Reporting Form. The CEC-1304 reporting form collects data from power plants with a total nameplate capacity of 1 MW or more that are located within California or within a control area with end users inside California. The information includes capacity, net generation, and fuel use by fuel type for each plant. See *QFER CEC-1304 Power Plant Owner Reporting Database* (ca.gov).

The U.S. Energy Information Administration (EIA) creates the annual fuel ethanol production capacity report. The report contains detailed nameplate capacity of fuel ethanol plants by Petroleum Administration for Defense District (PAD District) for all operating U.S. fuel ethanol production plants. See https://www.eia.gov/petroleum/ethanolcapacity/.

Maintained by the Pacific Northwest National Laboratory, the Merchant Hydrogen Plant Capacities In North America data file contains data on location, capacity, hydrogen source, and customers for individual hydrogen plants in North America. See *Merchant Hydrogen Plant Capacities in North America | Hydrogen Tools* (h2tools.org).

The U.S. Energy Information Administration (EIA) releases Refinery Utilization and Capacity data by PADDs which includes Operable Utilization Rate representing the utilization of the atmospheric crude oil distillation units. The rate is calculated by dividing the gross input to these units by the operable calendar day refining capacity of the units. See *PAD District 5 Refinery Utilization* and *Capacity* (eia.gov).

The Clean Energy and Pollution Reduction Act of 2015 (De Leon, Chapter 547, Statutes of 2015) (SB 350) put into law the requirement to serve 50% of the State's electricity use with renewable resources by 2030. See *50 RPS Procurement Rules* (ca.gov).

The study titled "Creation of unit process data for life cycle assessment of steam methane reforming and petroleum refining" and authored by B. Young, B. Morelli, and T. Hawkins, provides detailed, baseline gate-to-gate unit process data for petroleum refining and hydrogen production by PADDs. The datasets improve the resolution of the emissions attributable to specific processes involved in petroleum refining and steam methane reforming (SMR) and the attribution of emissions to the products of refineries. This study updated emission factors of fossil fuel production in the latest GREET model. See *Argonne GREET Publication: Creation of unit process* data for *life* cycle *assessment of steam methane reforming and petroleum refining* (anl.gov).

The CA-GREET3.0 model is used to generate the carbon intensities (CIs) of all fuel pathways. The CIs are calculated using a modified, California-specific version of Argonne National Laboratory's Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (GREET) model. See *CA-Greet 3.0 Supplemental Document and Tables of Changes.*

Benefits of California's GHG Standards on Reducing Emissions

Tables 1–3 summarize the criteria pollutant and GHG emissions reductions of California's GHG standards, apportioned for WTT (or upstream), TTW (or downstream), and total WTW emissions, respectively, as estimated by EMFAC2017. Tables 4–6 provide these estimates using

EMFAC2021. The two versions are used to show the benefits using the version currently approved by U.S. EPA for use in planning under the Clean Air Act, and using the next version that incorporates updated data and forecasting tools. For both approaches, the reductions are shown in the years for which the South Coast air basin must meet the National Ambient Air Quality Standards (NAAQS) for ozone.

As shown using EMFAC2017, CARB's GHG standards for passenger vehicles will result in a statewide decrease in tons per year (tpy) and tons per day (tpd) of upstream oxides of nitrogen (NOx) emissions of:

- 67 fewer tons per year NOx, or 0.18 tons per day, in calendar year 2023
- 358 fewer tons per year NOx, or 1.03 tons per day, in calendar year 2031, and
- 483 fewer tons per year NOx, or 1.39 tons per day, in calendar year 2037.

To consider this in context, NOx emissions in the South Coast air basin are approximately 278 tons per day as of calendar year 2021 for all mobile sources (annual average).[19] These emissions must be reduced to 141 tons per day to meet the 1997 ozone NAAQS of 80 parts per

[19] Based on CARB's CEPAM 2016 SIP Standard Emissions Tool https://www.arb.ca.gov/app/emsinv/fcemssumcat/fcemssumcat2016.php

billion (ppb), which has a deadline of 2023. To meet the 2008 standard of 75 ppb, which has a deadline of 2031, NOx emissions must be reduced to 96 tpd. A significant portion of the reductions described above will occur in the South Coast air basin because of its high concentration of people, vehicles, and refineries; they are a significant part of the solution to meeting the air quality standards in California. Every reduction matters to meet these health-based standards. (Other regions in California are also in non-attainment with federal standards for ozone, and reductions of all sizes are likewise needed there, although the South Coast air basin faces the most significant ozone air quality challenge in the country.)

Similarly, using EMFAC2017, CARB's GHG standards for passenger vehicles will result in a statewide decrease in carbon dioxide equivalent (MMTCO2e) GHG emissions of:

- 1.6 million fewer metric tons in 2023,
- 8.4 million fewer metric tons in 2031, and
- 11.3 million fewer metric tons in 2037.

Based on EMFAC2017, a typical passenger vehicle emits about 4.3 metric tons of CO2 per year. The statewide decreases in GHG emissions are equivalent to:

- 372,000 passenger vehicles in 2023,
- 2.0 million passenger vehicles in 2031, and
- 2.6 million passenger vehicles in 2037.

In comparison, using EMFAC2021, CARB's GHG standards for passenger vehicles will result in a statewide decrease in tons per year (tpy) and tons per day (tpd) of upstream oxides of nitrogen (NOx) emissions of:

- 51 fewer tons per year NOx, or 0.15 tons per day, in calendar year 2023
- 297 fewer tons per year NOx, or 0.86 tons per day, in calendar year 2031, and
- 404 fewer tons per year NOx, or 1.16 tons per day, in calendar year 2037.

And a statewide decrease in carbon dioxide equivalent (MMTCO2e) GHG emissions of:

- 1.2 million fewer metric tons in 2023,
- 7.0 million fewer metric tons in 2031, and
- 9.5 million fewer metric tons in 2037.

These results are shown in Tables 4-6, below.

Table 1. Tank-to-Wheel Downstream GHG Emissions Benefits of GHG Standards calculated using EMFAC2017

Years	Downstream Reductions (Tank-to-Wheel) CO2e (MMTCO2/year)
2021	0.3
2023	1.3
2030	6.4
2031	6.9
2035	8.6
2037	9.2

Table 2. Well-to-Tank Upstream Criteria and GHG Emissions Benefits of GHG Standards calculated using EMFAC2017

Years	Upstream Emissions Reductions—Well-to-Tank NOx (tpy)	Upstream Emissions Reductions—Well-to-Tank PM2.5 (tpy)	Upstream Emissions Reductions—Well-to-Tank CO2e (MMTCO2/year)
2021	13	1.7	0.05
2023	67	10.2	0.26
2030	331	58.7	1.42
2031	358	63.6	1.54
2035	449	79.9	1.95
2037	483	86.2	2.11

Table 3. Well-to-Wheel (Total) GHG Emissions Benefits of GHG Standards calculated using EMFAC2017

Years	Well to Wheel Reductions CO2e (MMTCO2/year)
2021	0.3
2023	1.6
2030	7.8
2031	8.4
2035	10.5
2037	11.3

Table 4. Tank-to-Wheel Downstream GHG Emissions Benefits of GHG Standards calculated using EMFAC2021

Years	Downstream Reductions (Tank-to-Wheel) CO2e (MMTCO2/year)
2021	0.2
2023	1.1
2030	5.3
2031	5.8
2035	7.3
2037	7.8

Table 5. Well-to-Tank Upstream Criteria and GHG Emissions Benefits of GHG Standards calculated using EMFAC2021

Years	Upstream Emissions Reductions—Well-to-Tank NOx (tpy)	Upstream Emissions Reductions—Well-to-Tank PM2.5 (tpy)	Upstream Emissions Reductions—Well-to-Tank CO2e (MMT CO2/year)
2021	8	0.8	0.02
2023	51	7.3	0.18
2030	273	47.9	1.12
2031	297	52.2	1.23
2035	375	66.3	1.58
2037	404	71.6	1.71

Table 6. Well-to-Wheel (Total) GHG Emissions Benefits of GHG Standards calculated using EMFAC2021

Years	Well to Wheel Reductions CO2e (MMTCO2e/year)
2021	0.2
2023	1.2
2030	6.5
2031	7.0
2035	8.9
2037	9.5

Appendix E

State of California
Air Resources Board

Passenger Vehicle Manufacturers Are Outperforming the ZEV Regulation

Staff Report

Date of Release: July 6, 2021

This report has been prepared by the staff of the California Air Resources Board and approved by the Executive Officer for publication. At this time, this report has not been approved by a vote of the Board itself, and, accordingly, the views expressed herein should not be assumed to necessarily reflect those of the Board. In addition, the use of trade names or commercial products herein does not constitute endorsement or recommendation.

Summary

Since 2005, all auto manufacturers have complied with California's Zero Emission Vehicle (ZEV) Regulation, and all have collectively exceeded its requirements—and by increasing margins. Since 2012, each auto manufacturer has entered every model year with a positive balance in its ZEV credit bank. Prior to 2017, manufacturer credit banks typically contained enough credits for one to two

years of compliance ahead of the ZEV requirement.[1] As of the end of the 2019 model year (MY), most manufacturers are retaining credit balances sufficient for compliance for two to five years.

Manufacturers are also complying more and more on their own. Transfers, or credit sales, between auto manufacturers have slowed dramatically in the last four years. Transfers went from an industrywide high of 93,770 total ZEV credits transferred in the 2015 model year among ten auto manufacturers to only 6,000 total ZEV credits transferred among two auto manufacturers in the 2019 model year.[2,3]

In sum, even if all manufacturers maintained ZEV production at model year 2019 levels and did not increase their ZEV production as expected or required, approximately half of the manufacturers would comply through model year 2025 based on their own credit banks and the industry as a whole would comply easily through model year 2025 through available credit transfers.

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[1] CARB, California's Advance Clean Cars Midterm Review, January 18, 2017, *MTR Summary (ca.gov)*, Appendix A: Analysis of Zero Emission Vehicle Regulation Compliance Scenarios: Estimated minimum 1.2 million ZEVs and PHEVs by 2025, p. A-9, *Attachment A Compliance Scenarios (ca.gov)*.

[2] 2015 ZEV Credit Annual Disclosure, https://ww2.arb.ca.gov/sites/default/files/2020-10/2019_zev_credit_annual_disclosure.pdf.

[3] 2019 ZEV Credit Annual Disclosure, https://ww2.arb.ca.gov/sites/default/files/2020-10/2019_zev_credit_annual_disclosure.pdf.

But manufacturers are in fact expected to increase ZEV production. Manufacturers have made tangible, public commitments to zero-emission technology. Manufacturers have steadily increased the performance and reduced the costs of their zero-emission technology, especially for battery-electric vehicles, and that trend is expected to continue. Battery charge capacity, vehicle range, and efficiency have all gone up. These all point to increased deployment of zero-emission technologies at costs competitive with conventional engines.

Analysis

To illustrate historical compliance margins, Figure 1 below shows MY 2012 through 2019 ZEV credit compliance requirements and the number of credits produced for

* * *

Excerpt from Comment Submitted by Toyota Motor North America, Inc., R-382, EPA-HQ-OAR-2021-0257-0381 (July 6, 2021)

TOYOTA
TOYOTA MOTOR NORTH AMERICA, INC.
Sustainability and Regulatory Affairs

July 6, 2021

U.S. Environmental Protection Agency
EPA Docket Center, Air Docket, Mail Code 28221T
1200 Pennsylvania Avenue NW
Washington, DC 20460

Subject: Public Comment Re: California State Motor Vehicle Pollution Control Standards; Advanced Clean Car Program; Reconsideration of a Previous Withdrawal of a Waiver of Preemption; Opportunity for Public Hearing and Public Comment, Docket ID No. EPA-HQ OAR-2021-0257

Dear Sir or Madam:

Toyota Motor North America, Inc. (TMNA) appreciates the opportunity to comment on the Environmental Protection Agency's (EPA's) notice of reconsideration of its prior action, "The Safe Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program" ("SAFE I"), withdrawing California's waiver of preemption for its zero-emission vehicle (ZEV) mandate and greenhouse gas (GHG) emissions standards. In addition to this proposed rulemaking, the National Highway Traffic

Safety Administration (NHSTA) is separately addressing the portion of SAFE 1 that interprets the preemption provision in the Energy Policy and Conservation Act (EPCA); the Alliance for Automotive Innovation, of which TMNA is a member, has already commented on that separate action.

TMNA Supports One National Program for Greenhouse Gases and Fuel Economy

It is TMNA's hope that the various regulatory and administrative actions described above will result in a regulatory framework that once again brings all automakers under a unified set of common requirements. Should EPA reinstate California's waiver, we request it be reinstated as it was originally granted, including the "deemed-to-comply" provision that was so important in establishing One National Program (ONP) over a decade ago.

Any Waiver Reinstatement Should Apply Prospectively

Reinstatement of California's waiver for model years 2021 and 2022 poses significant lead time challenges considering that 2021 model year is well underway, and 2022 model year vehicles are generally already designed, sourced, certified to various regulatory requirements, and ready to begin production. Some manufacturers may have already begun production of 2022 model year vehicles. As a result, a reinstatement of California's waiver by EPA should apply prospectively to model years 2023 and later.

TMNA remains committed to working with EPA, NHTSA, and CARB to craft a 50-state solution that protects the environment and U.S. energy security, promotes the industry's competitiveness, and supports automotive jobs and innovation.

Toyota's public comments addressing these issues in detail are set forth in Attachment 1. Thank you for your consideration of these comments. Should you have any questions, please feel free to contact me at (202) 463-6851 or tom.stricker@toyota.com.

Sincerely,

/s/ Tom Stricker
Tom Stricker
Group Vice President
Sustainability & Regulatory Affairs
Toyota Motor North America, Inc.

Excerpt from Comment Submitted by National Coalition for Advanced Transportation, R-132, EPA-HQ-OAR-2018-0283-5067 (July 6, 2021)

NCAT
NATIONAL COALITION FOR
ADVANCED TRANSPORTATION

Comments of the National Coalition for Advanced Transportation

On the U.S. Environmental Protection Agency's Notice of Opportunity for Public Hearing and Comment: California State Motor Vehicle Pollution Control Standards; Advanced Clean Car Program; Reconsideration of a Previous Withdrawal of a Waiver of Preemption

Docket No. EPA-HQ-OAR-2021-0257

July 6, 2021

Submitted via Regulations.gov

I. INTRODUCTION AND EXECUTIVE SUMMARY

The National Coalition for Advanced Transportation (NCAT) submits these comments in response to the Environmental Protection Agency's (EPA) notice entitled "California State Motor Vehicle Pollution Control Standards; Advanced Clean Car Program; Reconsideration of a Previous Withdrawal of a Waiver of Preemption; Opportunity for Hearing and Public Comment," Docket No. EPA-HQ-OAR-2021-0257, 86 Fed. Reg. 22,421 (Apr. 28, 2021) (Notice).

NCAT is a coalition of companies and non-profit organizations that support electric vehicle and other advanced transportation technologies and related infrastructure, including business leaders engaged in energy supply, transmission, and distribution; vehicle and component design and manufacturing; and charging infrastructure production and implementation, among other activities.[1] California's longstanding ability to set state vehicle standards drives innovation and incentivizes new technologies, in addition to significantly reducing air pollution. Over the past several years, NCAT has vigorously defended California's authority to issue its own state vehicle greenhouse gas (GHG) and Zero Emission Vehicle (ZEV) regulations.

NCAT strongly urges EPA to reconsider and rescind the unlawful actions the agency took in "The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program," 84 Fed. Reg. 51,310 (Sept. 27, 2019) (SAFE 1). In SAFE 1, EPA sought to strip California's and

* * *

[1] NCAT's membership is listed on its website https://www.lwncat.com/Membership.html, and currently includes Atlantic City Electric, Baltimore Gas & Electric, Center for Climate and Energy Solutions, ChargePoint, Commonwealth Edison Company, Delmarva Power, Edison International, EVgo, Exelon Corporation, Pacific Gas and Electric Company, PECO, PEPCO, Plug In America, Portland General Electric, Rivian Automotive, Sacramento Municipal Utility District, and Tesla, Inc. These comments represent an integrated package that reconciles individual member perspectives that may differ on specific issues; accordingly, no particular position should be attributed to any individual NCAT member.

VII. EPA FAILED TO CONSIDER INDUSTRY AND OTHER STAKEHOLDER RELIANCE INTERESTS IN ITS SAFE 1 ACTIONS

EPA has asked for comment on whether in its SAFE 1 action EPA identified and considered relevant reliance interests. 86 Fed. Reg. at 22,429. As NCAT has explained in litigation filings, in SAFE 1 EPA failed to justify its unilateral reversal of its prior decision and disregarded significant industry and other stakeholder reliance interests.

NCAT members have invested billions of dollars with the well-founded expectation that increased demand for electric vehicles would be propelled by California and the Section 177 States' continued ability to drive technology innovation and emission reductions. By purporting to withdraw these states' authority to enforce GHG and ZEV standards that incentivize the deployment of electric vehicles, EPA actions in SAFE 1 contradicted Congress' intent, and arbitrarily devalued NCAT members' reasonable investments in electric vehicle technology and supporting infrastructure. Innovation in the transportation sector requires very significant investments and advance planning. In the years since EPA granted California's waiver, the state GHG and ZEV standards have spurred billions of dollars of investment in electric vehicle manufacturing and infrastructure. NCAT members based substantial investments in part on the reasonable expectation that, regardless of what happened with the federal standards, California's and the Section 177 States' authority would remain intact.

EPA failed to address these industry reliance interests when it withdrew the waiver in SAFE 1 in 2019, and such failure was arbitrary and capricious. *See Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (declaring an agency's action arbitrary and capricious when an agency "entirely failed to consider an important aspect of the problem.").

For instance, NCAT Member Tesla, Inc. (Tesla) designs, develops, manufactures, and sells high-performance fully electric vehicles, among other products, and has made significant investments to establish, and continues to grow, a large network of retail stores, vehicle service centers, and electric vehicle charging stations to accelerate and support the widespread adoption of its vehicle products. For many years, the California standards have helped drive investment in electric vehicle manufacturing and technology because those performance standards incentivize manufacturing vehicles with lower GHG and criteria pollutant emissions and provide a mechanism by which vehicle manufacturers that deploy innovative technologies and out-perform the standards are rewarded as they can earn and sell tradeable compliance credits.[22] Tesla's required, public

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[22] *See, e.g.*, IHS Markit, The Economic Footprint of Tesla in California (May 15, 2018), https://ihsmarkit.com/research-analysis/the-economic-footprint-of-tesla-in-california.html (finding that in 2017 Tesla supported over 31,000 additional jobs in the state, and the company's economic impact in California goes far beyond that of its immediate employees and includes infusing over $4 billion into the California economy).

SEC filings regularly report quarterly revenue derived from automotive regulatory credit sales, including those occurring in California and other participating states' ZEV programs. Moreover, the regulatory certainty embodied in California and the Section 177 States' Model Year 2017-2025 GHG performance standards and ZEV programs have contributed to market conditions that have supported billions of dollars in manufacturing investments by Tesla. These are clear industry reliance interests that EPA failed to consider in its waiver withdrawal decision in SAFE 1.

* * *

Excerpt from Unopposed Motion by the State[] of California [et al.] to Intervene in the D.C. Circuit (filed May 19, 2022)

ORAL ARGUMENT NOT SCHEDULED

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 22-1081
(and consolidated cases)

STATE OF OHIO, *et al.*,

Petitioners,

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY AND MICHAEL S. REGAN, IN HIS OFFICIAL CAPACITY AS ADMINISTRATOR OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY,

Respondents.

UNOPPOSED MOTION BY THE STATES OF CALIFORNIA, COLORADO, CONNECTICUT, DELAWARE, HAWAII, ILLINOIS, MAINE, MARYLAND, MINNESOTA, NEVADA, NEW JERSEY, NEW MEXICO, NEW YORK, NORTH CAROLINA, OREGON, RHODE ISLAND, VERMONT, AND WASHINGTON; THE COMMONWEALTHS OF MASSACHUSETTS AND PENNSYLVANIA; THE DISTRICT OF COLUMBIA; AND THE CITIES OF LOS ANGELES AND NEW YORK FOR LEAVE TO INTERVENE IN SUPPORT OF RESPONDENTS

INTRODUCTION

Pursuant to Federal Rule of Appellate Procedure (FRAP) 15(d) and Circuit Rule 15(b), the States of California, Colorado, Connecticut, Delaware, Hawaii, Illinois, Maine, Maryland, Minnesota, Nevada, New Jersey, New Mexico, New York, North Carolina, Oregon, Rhode Island, Vermont, and Washington; the Commonwealths of Massachusetts and Pennsylvania; the District of Columbia; and the cities of Los Angeles and New York (collectively, "Movant-Intervenor States") hereby move the Court for leave to intervene in case number 22-1081 and all consolidated cases in support of Respondents United States Environmental Protection Agency (EPA) and Administrator Regan.

Petitioners in these consolidated cases challenge EPA actions that directly affect Movant-Intervenor States' abilities to enforce the state vehicular emission

standards they have chosen to adopt in order to protect their residents and their States' resources. Accordingly, and as explained in more detail below, Movant-Intervenor States have undeniable sovereign interests at stake in this litigation. Movant-Intervenor States also have substantial interests in the benefits—including emission reductions—that the state laws at issue are designed to provide. Movant-Intervenor States easily satisfy the requirements for intervention and respectfully request the Court grant this motion.

Counsel for all Petitioners and for Respondents indicated they do not oppose Movant-Intervenor States' intervention.

* * *

Excerpts of Declaration of Sylvia Vanderspek (May 16, 2022)

I, Sylvia Vanderspek, declare as follows:

Relevant expertise

1. I make this declaration based upon my knowledge and expertise in the matters within, my review of the relevant rulemakings, reports, and other documents discussed below, and (where indicated) information provided by my colleagues at the California Air Resources Board (CARB). I submit this declaration in support of Movant-Intervenor State of California's Motion to Intervene in this challenge.

2. I am the Chief of the Air Quality Planning Branch in the Air Quality Planning & Science Division at CARB. I have held this position since May 2013.

3. I am the lead manager responsible for the Clean Air Act state implementation planning and control strategy development throughout the State for meeting air quality standards. The State Implementation Plan is required by the Clean Air Act for areas that do not meet air quality standards and describes how those air quality standards will be met by their attainment deadline. As part of the control strategy development, I oversaw the development of the 2016 Mobile Source Strategy[1] and 2020 Mobile Source Strategy[2] integrating the technologies for and approaches to criteria emission reductions with climate and toxic emission reductions in the mobile source sector. The Mobile Source Strategies build upon past and inform future State Implementation Plans as well as California's Climate Change Scoping Plan and Community Emission Reduction Plans.

4. In fulfilling my responsibilities as the lead manager for Clean Air Act state implementation planning throughout the State, I routinely review relevant plans and reports, and in doing so rely on my knowledge of: atmospheric modeling of air pollution, atmospheric reactions that contribute to air pollution, air pollution trends and projections, other causes of air pollution, and the health effects of air pollution. My knowledge

[1] Mobile Source Strategy (May 2016), https://ww3.arb.ca.gov/planning/sip/2016sip/2016mobsrc.pdf.

[2] Mobile Source Strategy (Oct. 2021), 2020 Mobile Source Strategy (ca.gov).

of atmospheric modeling, including the atmospheric reactions that contribute to air pollution, is critical to my management of State Implementation Plan planning in order to identify the most effective strategies for providing healthy air for the residents of California. I also use my knowledge of air pollution trends and emissions, along with future emission projections, when overseeing the selection of future strategies and their impact on air quality. And as part of the State Implementation Plan planning process, I must analyze the health effects of criteria pollutants and other air pollutants.

* * *

light-duty vehicle greenhouse gas emission and ZEV standards be overturned, it would result in higher criteria pollutant and greenhouse gas emissions and increase concentrations of ground-level ozone and particulate matter.

22. In particular, without enforceable ZEV sales requirements, it is reasonable to expect that there would be fewer ZEVs produced and sold than would otherwise have been to meet existing requirements, and thus additional gasoline-fueled vehicles produced and sold during these model years to meet the market's demand for vehicles, all else being equal. This would increase criteria pollutant emissions, as CARB modeling has confirmed.[18]

[18] *E.g.*, CARB, Appendix A to Comments of States and Cities in Support of EPA Reversing its SAFE 1 Actions, at 2-3 (July 6, 2021), Docket No. EPA-HQ-OAR-2021-0257-0132 (hereinafter "2021 Multistate Comments"); CARB, Appendix B to 2021 Multistate Comments, at 11-14; Analysis in Support of Comments

And the increase in greenhouse gas emissions resulting from preemption of both standards will also impede progress toward attaining NAAQS.

23. As a result, for each of California's current implementation plans that included the ZEV mandate, California could not rely on the expected emission reductions from its requirements for clean transportation. The increased emissions that would result from reversal of the waiver restoration would need to be mitigated by developing additional enforceable control measures. But the

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of the California Air Resources Board on the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks, at 69, 288, 294-302 (Oct. 26, 2018), Docket No. NHTSA-2018-0067-11873.

Excerpts of Declaration of Elizabeth Scheehle
(May 16, 2022)

I, Elizabeth Scheehle, state and declare as follows:

Experience

1. I am currently the Chief of the Research Division of the California Air Resources Board (CARB). I have a B.S. in Earth and Atmospheric Sciences from the Georgia Institute of Technology, a Masters of Public Policy from the Kennedy School of Government at Harvard University, and a Masters of Public Health from the Bloomberg School of Public Health at Johns Hopkins University.

2. I have worked for more than 20 years in climate change and air quality programs, starting at the U.S. Environmental Protection Agency (U.S. EPA) where I led national and international efforts on non-carbon dioxide greenhouse gases (GHGs). I served as an expert for the United Nations Framework Convention on Climate Change and the Intergovernmental Panel on Climate Change (IPCC). In that role, I earned recognition for my contribution to the IPCC's Nobel Prize. I continued my career at U.S. EPA, developing its Carbon Capture and Sequestration expertise, including comprehensive risk assessment considerations.

3. I joined CARB's Research Division in 2007 and led three climate change-related efforts: carbon capture and sequestration, an ozone-depleting substance offset protocol, and an early action climate measure. I was a Section

* * *

Global Warming Solutions Act, requiring the State to reduce its greenhouse gas emissions to 1990 levels by 2020. This legislation directed CARB to adopt regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emission reductions. It further directed CARB to develop a Scoping Plan laying out California's strategy for meeting its climate goals, to be updated every five years. In 2016, the State Legislature set more ambitious goals in Senate Bill (SB) 32, which directs CARB to ensure that State greenhouse gas emissions are reduced 40 percent below 1990 levels by 2030.

14. As part of its efforts to reduce both greenhouse gas emissions and criteria pollutants (air pollutants with national ambient air quality standards), CARB has regulated emissions from light-duty vehicles since 1959. In 2012, CARB combined these emission standards and established its Advanced Clean Cars program. In 2013, California obtained from U.S. EPA a waiver of preemption under the Clean Air Act for this program (the 2013 waiver), including the State's vehicle criteria pollutant standards, greenhouse gas emission standards, and zero-emission vehicle (ZEV) mandate.

15. California's ZEV mandate is technology forcing, as it has required increasing numbers of ZEVs to be sold annually within the State since 2009.[14] And it has been successful: sales of ZEVs have risen to more than 7 percent

[14] 13 Cal. Code Regs. §§ 1962.1, 1962.2.

of new car sales in California, equal to more than 140,000 ZEVs and plug-in hybrids in 2019.[15] California's current ZEV regulations are on track to produce 1.5 million ZEVs on the road by 2025 and over 2 million by 2030. California's light-duty vehicle greenhouse gas standards also produce year-over-year reductions in greenhouse gas emissions, by about 5 percent per year for model years 2020 through 2025.[16] Because light-duty vehicles remain the largest source of emissions within the transportation sector and are responsible for 70 percent of the State's transportation greenhouse gas emissions, California's light-duty vehicle greenhouse gas emission standards and the ZEV mandate with its resulting technological penetration were key pieces to California's 2017 Scoping Plan update, by which the State outlined how it would meet its increasingly stringent climate obligations.[17]

The EPA's 2013 Waiver Revocation and Restoration

16. In 2018, EPA took the unprecedented action of proposing to withdraw the portions of the 2013 waiver for California's greenhouse gas emission and ZEV standards, an action it finalized in September 2019 (the

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[15] *E.g.*, California New Car Dealers Association, 16 CAL. AUTO OUTLOOK, no. 1, Feb. 2020, at 2, https://www.cncda.org/wp-content/uploads/Cal-Covering-4Q-19.pdf.

[16] 13 Cal. Code Regs. § 1961.3.

[17] *E.g.*, CARB, *California's 2017 Climate Change Scoping Plan* at 25 (Nov. 2017), https://ww3.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf.

so-called "SAFE" Part One Rule).[18] California challenged EPA's SAFE Part One Rule as arbitrary, capricious, and unlawful. That litigation was stayed upon the Biden Administration's direction to EPA to reconsider its SAFE rules.

17. EPA restored the withdrawn portions of the 2013 waiver in March 2022.[19] That restoration has now been challenged. Should EPA's restoration of California's 2013 waiver for the State's existing light-duty vehicle greenhouse gas emission and ZEV standards be overturned, it would result in higher greenhouse gas and criteria pollutant emissions. Indeed, fewer ZEVs are likely to be sold than would otherwise have been to meet existing requirements, all else equal, and thus additional gasoline-fueled vehicles would be sold during these model years. These additional gasoline-fueled cars would produce substantially more greenhouse gas emissions over their lifetimes than the ZEVs they will displace not only because gasoline-fueled vehicles produce emissions, unlike ZEVs, but also because vehicle tailpipe and evaporative emissions substantially increase over time due to the deterioration of the emission controls. For instance, a model year 2020 gasoline-fueled vehicle overall produces about four times as many greenhouse gas emissions as a ZEV.[20]

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[18] 84 Fed. Reg. 51,310 (Sept. 27, 2019); 83 Fed. Reg. 42,986 (Aug. 24, 2018).

[19] 87 Fed. Reg. 14,332 (March 14, 2022).

[20] CARB, *Fact Sheet: The Zero Emission Vehicle (ZEV) Regulation* (2018), https://ww2.arb.ca.gov/sites/default/files/2019-06/zev_regulation_factsheet_082418_0.pdf.

18. Over time, these repercussions will expand. Without the critical push from the ZEV standards, ZEVs' market share would likely fail to expand at the rate needed to meet California's climate and public health requirements. This loss of greenhouse gas emissions reductions amplifies the risk of further climate impacts California is already facing, as discussed below.

Climate Change Impacts on California

19. California is one of the most geographically and ecologically diverse regions in the world, with landscapes ranging from chaparral and grasslands to sandy beaches and rugged coastal areas to redwood rainforests and dense interior forests to snow-covered alpine mountains to dry desert valleys. Each of these regions experiences a unique combination of impacts from climate change. From record temperatures to increasingly intense wildfires[21] to rising sea levels and increasingly acidic seas[22] to less reliable snowpack,[23] climate change poses an

* * *

[21] N.S. Diffenbaugh, A.G. Konings, C.B. Field, (2021). Atmospheric variability contributes to increasing wildfire weather but not as much as global warming. Proceedings of the National Academy of Sciences Nov 2021, 118 (46) e2117876118; DOI: 10.1073/pnas.2117876118. https://www.pnas.org/content/118/46/e2117876118.

[22] E.B. Osborne, et al., *Decadal Variability in Twentieth-century Ocean Acidification in the California Current Ecosystem*, 13 NAT. GEOSCI. 43–49 (2020), https://doi.org/10.1038/s41561-019-0499-z.

[23] P.W. Mote, et al., *Dramatic Declines in Snowpack in the Western US*, 1 NATURE PARTNER JS. CLIM. ATMOS. SCI. (2018), https://doi.org/10.1038/s41612-018-0012-1.

Excerpts from Private Petitioners' Final Brief in the D.C. Circuit (filed Mar. 20, 2023)

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA

No. 22-1081 (and consolidated cases)

STATE OF OHIO, *et al.*,

Petitioners,

v.

ENVIRONMENTAL PROTECTION AGENCY AND MICHAEL S. REGAN, IN HIS OFFICIAL CAPACITY AS ADMINISTRATOR OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY,

Respondents,

ADVANCED ENERGY ECONOMY, *et al.*,

Intervenors.

ORAL ARGUMENT NOT YET SCHEDULED

On Petition for Review from the United States Environmental Protection Agency (No. EPA-HQ-OAR-2021-0257)

FINAL BRIEF FOR PRIVATE PETITIONERS

* * *

STANDING

Petitioners include entities that produce or sell liquid fuels and the raw materials used to produce them, along with associations whose members include such entities. By design, California's greenhouse-gas standards and zero-emission-vehicle mandate reduce the demand for liquid fuels and their raw materials by forcing automakers to sell vehicles that use significantly less liquid fuel or no liquid fuel at all. As shown in the accompanying declarations, depressing the demand for those fuels injures petitioners and petitioners' members financially. California itself found that the "oil and gas industry, fuel providers, and service stations are likely to be" the industries "most adversely affected" by California's Advanced Clean Cars program and the resulting "substantial reductions in demand for gasoline" in California. J.A. 801; *see* J.A. 799; J.A. 830, 832. This economic injury to petitioners and petitioners' members constitutes injury-in-fact under Article III. That injury is caused by the challenged regulatory action, and this Court can redress that injury by setting aside the action. *See, e.g., American Fuel & Petrochemical Mfrs. v. EPA*, 3 F.4th 373, 379-80 (D.C. Cir. 2021); *Airlines for Am. v. TSA*, 780 F.3d 409, 410-411 (D.C. Cir. 2015).

The petitioners that are membership associations also have associational standing to challenge EPA's decision. *See Hunt v. Wash. State Apple Advert. Comm'n*, 432 U.S. 333, 342-343 (1977). Their members have standing to sue in their own right, for the reasons described. The interests petitioners seek to protect are germane to their organizational purposes, which include safeguarding the

viability of their members' businesses. And neither the claims asserted nor the relief requested requires the participation of individual members.

STANDARD OF REVIEW

This Court "shall hold unlawful and set aside agency action" that is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law"; "contrary to constitutional right, power, privilege, or immunity"; or "in excess of statutory jurisdiction, authority, or limitations, or short of statutory right." 5 U.S.C. § 706(2)(A)-(C).

ARGUMENT

I. EPA Exceeded Its Statutory Authority In Reinstating A Waiver For California To Set Emission Standards Meant To Address Global Climate Change.

To prevent "an anarchic patchwork of federal and state regulatory programs," the Clean Air Act establishes federal control over motor-vehicle emission standards. *MEMA*, 627 F.2d at 1109. It does so through Section

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Respondents,

ADVANCED ENERGY ECONOMY, *et al.*,

Intervenors.

ORAL ARGUMENT NOT YET SCHEDULED

On Petition for Review from the United States Environmental Protection Agency (No. EPA-HQ-OAR-2021-0257)

PRIVATE PETITIONERS' FINAL ADDENDUM OF STATUTES AND STANDING DECLARATIONS

* * *

STANDING DECLARATIONS

A. Chris Bambury, Vice President of Bambury, Inc., Board Member of the National Association of Convenience Stores

B. Dave Loos, Director of Biofuels and Research of the Illinois Corn Growers Association

C. Deepak Garg, Vice President of the Fuels Regulatory and Planning, and HSE Assurance division servicing Valero Renewable Fuels Company, LLC and Diamond Alternative Energy, LLC

D. Erin Graziosi, President of Robinson Oil Company, a Member of the National Association of Convenience Stores and California Fuels and Convenience Alliance

E. Jennifer M. Swenton, Director of Optimization Planning and Economics division for Valero Renewable Fules Company, LLC

F. James E. Zook, Executive Director of the Michigan Corn Growers Association

G. Josh Roe, Vice President of Market Development and Policy of the Kansas Corn Growers Association

H. Kirk Leeds, CEO of the Iowa Soybean Association

I. Lane Howard, Associate Director of Market Development of the Missouri Corn Growers Association

J. Rock Zierman, CEO of the California Independent Petroleum Association, a Member of the Domestic Energy Producers Alliance

K. Susan W. Grissom, Chief Industry Analyst for the American Fuel & Petrochemical Manufacturers

L. Trecia Canty, Senior Vice President, General Counsel and Secretary for PBF Energy, a Member of American Fuel & Petrochemical Manufacturers

M. Trevor Hinz, Director of Government and Industry Relations of ICM, Inc.

N. Varish Goyal, CEO of Au Energy, Member of the National Association of Convenience Stores

* * *

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

Case No. 22-1081 and consolidated cases

STATE OF OHIO, *et al.*,

Petitioners,

v.

ENVIRONMENTAL PROTECTION AGENCY AND MICHAEL S. REGAN, IN HIS OFFICIAL CAPACITY AS ADMINISTRATOR OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY,

Respondent,

ADVANCED ENERGY ECONOMY, *et al.*,

Intervenors.

DECLARATION OF CHRIS BAMBURY

I, Chris Bambury, declare under penalty of perjury that the following is true and correct to the best of my knowledge:

1. I am the Vice President of Bambury, Inc. ("Bambury"), a family-owned and operated business in California. Bambury is a fourth-generation operated company that just celebrated 100 years since it was

established. For 50 years it operated towing and auto repair services, but recently ceased those operations due to profitability challenges. We've operated a foodservice (deli) business for over 30 years, but it has struggled through COVID.

2. Bambury is a member of the National Association of Convenience Stores ("NACS"), and I currently serve on the Board of Directors of NACS. I am also the Senior Vice President of the California Fuels and Convenience Alliance ("CFCA"), which is the state association that represents independently owned convenience store operators and fuel marketers. While CFCA is not formally affiliated with NACS, the two organizations collaborate and share resources to stay on top of federal, state, and local issues, such as EPA's decision to grant California a waiver for its greenhouse-gas standards and its zero-emission-vehicle mandate.

3. Bambury owns and operates three retail convenience stores in Sonoma, California, two of which have fueling stations. These stores and our fuel are branded under the name BONNEAU, after our founders August and Catherine Bonneau, my great grandparents. We currently employ 32 employees between three locations. Bambury does not own or operate any stores or fueling stations outside of California.

4. Approximately 85% of Bambury's revenue comes from fuel sales. The other 15% comes from the sale of beverages, snacks, tobacco, lotto, and other convenience-store items.

5. I am generally familiar with California's regulations limiting vehicular greenhouse-gas emissions and mandating zero-emission vehicles. I am also aware that earlier this year the federal government reinstated a waiver that permits the State to implement these standards.

6. I understand that California's greenhouse-gas standards and zero-emission-vehicle mandate reduce the demand for fuel in California by requiring automakers to deliver vehicles for sale in California that are more fuel efficient, as well as a minimum percentage of zero-emission vehicles, such as electric vehicles, that do not run on conventional fuels.

7. Reducing the demand for fuel harms Bambury financially. Drivers of low- and zero-emission vehicles have less of a need, or no need at all, to stop at our gas stations to refuel. As a result, our locations that offer fueling sell less fuel, directly harming Bambury's bottom line.

8. In addition, because customers at those locations come through our stores and make retail purchases when they stop to refuel, our retail sales suffer when drivers refuel less often.

9. Although Bambury recently installed four electric-vehicle chargers at its stores, revenue from these charging stations will not replace our lost revenue from fuel and retail sales. Because most electric-vehicle drivers are able to recharge at home or at work, each charging station averages one to two charges every other day, and

zero charges on other days. By comparison, each of our fueling positions averages over 100 patrons per day. The charging stations are not a significant source of revenue, and I do not anticipate that they will become a significant source in the future.

10. For these reasons, the waiver allowing California to implement its greenhouse-gas emission standards and zero-emission-vehicle mandate harms Bambury financially.

Dated: 10/19/2022

/s/_____
Chris Bambury

IN THE UNITED STATES COURT OF APPEALS
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STATE OF OHIO, *et al.*,

Petitioner,

v.

U.S. ENVIRONMENTAL
PROTECTION AGENCY, *et al.*,

Respondent.

DECLARATION OF DAVE LOOS OF ILLINOIS CORN GROWERS ASSOCIATION IN SUPPORT OF PETITIONERS' OPENING BRIEF

I, Dave Loos, declare under penalty of perjury that the following is true and correct to the best of my knowledge:

1. I am the Director of Biofuels and Research of the Illinois Corn Growers Association, a nonprofit trade association based in Illinois with a membership of 5,000 corn farmers, as well as their supporters and members of corn farming-related industries. We operate to promote the general commercial, legislative, and other common interests of our members.

2. I am familiar with all aspects of the Association's work and with the market for corn and products, such as ethanol, that are made using the corn grown by our members.

3. Illinois is one of the nation's leading corn producing states, with a net production of more than 2 billion bushels of corn. The majority of this corn is used as a feedstock for ethanol production.

4. The ethanol industry supports over 400,000 jobs in more than 25 states. Ethanol contributes more than $52 billion to the national GDP and profitably processed more than 5.1 billion bushels of corn in 2021.

5. Ethanol is the second-largest component of the fuel that powers the United States' vehicle fleet. Ethanol provides a low carbon source of energy and octane rating the measure of a fuel to resist "knocking" in an engine—reducing vehicles' fuel usage, net greenhouse gas emissions, and the emission of toxic chemicals such as benzene. Across most of the United States, refiners add 10% ethanol to gasoline in part to raise its octane rating to a level suitable for use in most vehicles. In 2021 alone the use of ethanol reduced greenhouse gas emissions by more than 50 million metric tons, equivalent to the savings of turning off 126 natural gas-fired power plants. *See* EPA, *Greenhouse Gas Equivalencies Calculator* (Oct. 11, 2022), https://www.epa.govienergy/greenhou.se-gas-equivalenciescalculator. In California, over the last decade the use of ethanol has resulted in 26.9 metric tons of GHG emission savings.

6. The United States Environmental Protection Agency promulgated a final agency action entitled *California State Motor Vehicle Pollution Control Standards; Advanced Clean Car Program; Reconsideration of a Previous Withdrawal of a Waiver of Preemption; Notice of Decision*, 87 Fed. Reg. 14,332 (Mar. 14, 2022) ("Waiver Restoration"). This decision purports to reinstate a waiver of Clean Air Act preemption to California (and, by extension, to some seventeen other states that have opted to copy California's regulations) to impose its own greenhouse gas emissions standards for new automobiles as well to impose a zero-emissions vehicle sales quota.

7. As California explained in its original waiver request, California's regulations will reduce emissions through "'reductions in fuel production.'" 87 Fed. Reg. 14,364 (quoting 2012 Waiver Request, EPA-HQ-OAR-2012 0562-0004 at 16). Economic harm from these rules is not speculative. Indeed, California estimated "substantial reductions in demand for gasoline—exceeding $1 billion beginning in 2020 and increasing to over $10 billion in 2030." Cal. Air Resources Bd., *Staff Report: Initial Statement of Reasons for Proposed Rulemaking, Public Hearing to Consider the "LEV III" Amendments to the California Greenhouse Gas and Criteria Pollutant Exhaust Emission Standards* 201 (Dec. 7, 2011). By reducing total gasoline consumption, if gasoline remains at the current 10% ethanol blend level, ethanol demand destruction will also result.

8. While these standards are in effect, they will drive down demand for ethanol, not only in California but also in states that have adopted California's standards: Colorado, Connecticut, Delaware, Maine, Maryland, Massachusetts, Minnesota, New Jersey, Nevada, New Mexico, New York, Oregon, Pennsylvania, Rhode Island, Vermont, Virginia, Washington, and the District of Columbia.

9. This demand destruction harms the Illinois Corn Growers Association and its members by decreasing demand for the corn they grow, particularly in California and in states that have adopted California's standards. According to the U.S. Energy Information Administration, California consumes 10% of the nation's fuel ethanol supply, which is about seven times more than ethanol plants operating within the State can produce. *See* U.S. Energy Information Administration, *California State Energy Profile* (Oct. 20, 2022), https://www .eia.gov/state/print.php?sid=CA.

10. These financial harms affect our members and also redound to the Association itself, which will lose funding it uses to pursue its mission of advocating for the interests of its members.

11. All these injuries would be substantially ameliorated if EPA's decision were set aside.

Dated: October 22, 2022

/s/
Dave Loos

IN THE UNITED STATES COURT OF APPEALS
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U.S. ENVIRONMENTAL
PROTECTION AGENCY, *et al.*,

Respondents.

DECLARATION OF DEEPAK GARG

I, Deepak Garg, declare under penalty of perjury that the following is true and correct to the best of my knowledge:

1. I am a Vice President leading the Fuels Regulatory and Planning and HSE Assurance division servicing Valero Renewable Fuels Company, LLC ("Valero Renewables") and Diamond Alternative Energy, LLC ("Diamond Alternative"). I am responsible for a wide range of compliance and business matters relating to Valero Renewables and Diamond Alternative's production and sale of renewable fuels such as ethanol and renewable diesel. My responsibilities include analyzing market and economic impacts of regulatory and statutory changes on

the liquid fuels production industry, including the impacts on renewable fuels.

2. I have extensive experience in ensuring the Valero family of companies' cost-effective compliance with the requirements of the federal Renewable Fuel Standard, which requires so-called "obligated parties" to blend certain percentages of renewable fuels into transportation fuels or to purchase an equivalent number of "Renewable Identification Numbers" credits, or RINs, to meet an EPA-specified Renewable Volume Obligation ("RVO").

3. In addition, I have extensive experience with California's Low Carbon Fuel Standard ("LCFS") program. The LCFS is designed to reduce greenhouse gas emissions by setting a carbon intensity ("CI") benchmark for transportation fuels consumed in the State, which decreases over time. Under this program, each fuel is assigned a CI value based on a model produced by the California Air Resources Board ("CARB"). The CI value is intended to represent the GHG emissions associated with the feedstocks from which the fuel was produced, the fuel production and distribution activities, and the use of the finished fuel. Fuels below the benchmark generate LCFS credits, while fuels above the benchmark generate deficits. The lower the fuel's CI score compared to the benchmark, the greater number of credits generated. Each producer or importer of fuel must demonstrate that the overall mix of fuels it supplies for use in California meets the CI benchmarks for each compliance period. A producer or importer with a fuel mix that is above the CI benchmark must purchase LCFS credits sufficient to meet the CI benchmark.

4. I am generally aware of EPA's decision to waive federal preemption for regulations issued by the State of California under its Advanced Clean Cars I ("ACC I") program. It is my understanding that the State of California has found that both the Lower Emission Vehicle regulations and the Zero-Emission Vehicle regulations in the ACC I program reduce demand for liquid transportation fuels within the State. As I understand it, the Zero-Emission Vehicle regulations require automakers in the State to sell a minimum percentage of so-called "zero-emission vehicles," such as electric vehicles, each year (up to 22% for large manufacturers in model year 2025). 78 Fed. Reg. 2111, 2114, 2119 (Jan. 9, 2013). These electric vehicles displace new internal combustion engine vehicles in the State that are powered by gasoline, diesel, and renewable fuels.

5. As a result, the ACC I program causes financial injury to Valero Renewables and Diamond Alternative, which produce ethanol and renewable diesel, respectively, for sale in the State of California, along with valuable LCFS credits and RINs.

6. Valero Renewables is an independent ethanol producer owning and operating 12 ethanol plants with a combined production capacity of around 1.6 billion gallons per year.

7. Ethanol is the second-largest component of the fuel that powers the United States' vehicle fleet. Ethanol provides a low carbon source of energy and octane rating—the measure of a fuel to resist "knocking" in an

engine—reducing vehicles' fuel usage and net greenhouse gas ("GHG") emissions. Across California, as in most of the United States, refiners add ethanol to gasoline to raise its octane rating to a level suitable for use in most vehicles, with the result that approximately 10% of the final product consists of ethanol, and to meet federal renewable mandates. Over the past decade, the use of ethanol in California has 26.9 million metric tons of GHG emission savings. Erin Voegele, *California ethanol producers ask Feinstein to withdraw bill*, Ethanol Producer (Aug. 3, 2021), shorturl.at/cnwM9.

8. California is a substantial part of Valero Renewables' ethanol market. According to the U.S. Energy Information Administration ("EIA"), California is the second largest consumer of motor gasoline among the 50 states. The State also accounts for 10% of the nation's fuel ethanol demand, which is about seven times more than ethanol plants operating within the State can currently produce. EIA, California State Energy Profile, https://www.eia.gov/state/print.php?sid=CA (last visited Oct. 20, 2022). In other words, much of the ethanol consumed in the State of California is imported from producers like Valero Renewables. In fact, in 2021, Valero Renewables imported more than 10.5 million gallons of ethanol into the State of California. It is anticipated that ethanol imports from Valero Renewables will be substantially greater in 2022, as Valero's ethanol production has been altered to manufacture a lower carbon intensity product specifically designed to go to California. Gasoline demand destruction in California would undermine the substantial economic investment in this project by Valero Renewables.

9. Diamond Alternative is a part owner of the Diamond Green Diesel renewable diesel production facility in St. Charles Parish, Louisiana. Diamond Green Diesel currently produces over 700 million gallons of renewable diesel per year at its St. Charles production facility, making it America's largest renewable diesel plant, and is expected to produce over 1.2 billion gallons of renewable diesel per year once its newly-constructed production facility in Port Arthur, Texas begins production later this year or early next year.

10. Renewable diesel is made from sustainable low-carbon feedstocks, such as used cooking oil, inedible animal fats derived from processing meat fats, soy bean oil, and inedible corn oil. Its chemical composition is nearly identical to that of petroleum-based diesel, making it a "drop-in" fuel that can be stored, distributed, and used interchangeably with petroleum-derived diesel, but its production results in up to 80% fewer greenhouse gas emissions for the finished fuel.

11. Even more so than ethanol, California plays an enormous role in driving demand for renewable diesel. According to the EIA, California accounts for almost all of the renewable diesel consumed in the United States. EIA, California State Energy Profile, https://www.eia.gov/state/print.php?sid=CA (last visited Oct. 20, 2022). Currently, approximately 65% of the renewable diesel produced by the DGD St. Charles facility is sold into California.

12. The ACC I program also impacts revenues Valero Renewables and Diamond Alternative obtain through their participation in the LCFS and RFS programs.

13. Ethanol produced by Valero Renewables and renewable diesel produced by Diamond Alternative have CI scores that are lower than traditional petroleum-based transportation fuels. Therefore, these fuels generate LCFS credits that have significant monetary value and are an important part of the business planning and economics for the renewable fuels facilities, as they generate hundreds of millions of dollars in revenue annually. Both Valero Renewables and Diamond Alternative rely on credit revenue to provide a return on investment, and decreased demand for renewable fuels in the State would undermine these expectations. By way of example, the economics underlying the significant investment in the Port Arthur renewable diesel facility were driven, in large part, by the expectation of LCFS credit values.

14. Likewise, Valero Renewables and Diamond Alternative rely on revenue from RIN sales. As demand for liquid transportation fuels decreases in the State, so do the RIN revenues these businesses generate.

* * *

15. These economic impacts are not speculative. Indeed, as California asserted in its original waiver request, the ACC I program aims to reduce emissions through "reductions in fuel production." 87 Fed. Reg. 14,332, 14,364 (Mar. 14, 2022) (quoting 2012 Waiver

Request, EPA-HQ-OAR-2012-0562-0004 at 16). This would, in turn, result in depressed demand for liquid fuels, including the demand for the ethanol that Valero Renewables produces and imports into the State and the renewable diesel that Diamond Green Diesel manufactures and imports into the State. R-7041 (CARB, LEV Initial Statement of Reasons at 201, 199 (2012)); R-8158 at 68, 70 (CARB, ZEV Initial Statement of Reasons (2012)) (recognizing that "oil and gas industry, fuel providers, and service stations are likely to be" the industries "most adversely affected" by California's regulations and the resulting "substantial reductions in demand for gasoline" in California.").

16. All these injuries would be substantially ameliorated if EPA's decision were set aside.

Dated: October 24, 2022

/s/
Deepak Garg

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

Case No. 22-1081 and consolidated cases

STATE OF OHIO, *et al.*,

Petitioners,

v.

ENVIRONMENTAL PROTECTION AGENCY AND MICHAEL S. REGAN, IN HIS OFFICIAL CAPACITY AS ADMINISTRATOR OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY,

Respondent,

ADVANCED ENERGY ECONOMY, *et al.*,

Intervenors.

DECLARATION OF ERIN GRAZIOSI

I, Erin Graziosi, declare under penalty of perjury that the following is true and correct to the best of my knowledge:

1. I am the President of Robinson Oil Corporation ("Robinson Oil"), a fourth-generation family business headquartered in Santa Clara County, California. We own and operate fueling stations and convenience stores;

operate five fuel trucks that deliver to our stations only; and also run our own wholesale fuel and maintenance departments for the benefit of our retail stores, as well as a commercial fueling department that markets fleet cards.

2. Robinson Oil is a member of the National Association of Convenience Stores ("NACS"). In addition, I currently serve as the President of the California Fuels and Convenience Alliance ("CFCA"), which is our California state association that represents the needs of independent wholesalers, retail marketers, and transporters of fuel, as well as retail convenience stores. Most of our members are small-business owners, many of which are family-owned and multi-generational. CFCA partners with NACS regularly on issues that affect our membership.

3. Robinson Oil owns and operates 36 unbranded fueling stations with convenience stores of various sizes in Northern California, with three more in the building or permit stages. The convenience stores operate under the brand name Rotten Robbie, each of which has 4 to 20 employees. Overall we have about 300 employees. Robinson Oil does not own or operate any fueling stations or stores outside of California.

4. The bulk of Robinson Oil's revenue—over 70%—comes from fuel sales. As described below, with diminishing fuel sales, I believe we would also have fewer customers coming into our stores, which would reduce the store purchases that make up another portion of our revenue.

5. I am generally familiar with California's standards regulating vehicular greenhouse-gas emissions and mandating zero-emission vehicles. I am also aware that earlier this year the federal government reinstated a waiver that permits the State to implement these standards.

6. I understand that California's greenhouse-gas standards and zero-emission-vehicle mandate reduce the demand for fuel in California by requiring automakers to deliver vehicles for sale in California that are more fuel efficient, as well as a minimum percentage of zero-emission vehicles, such as electric vehicles, that do not run on conventional fuels.

7. Reducing the demand for fuel harms Robinson Oil financially. Drivers of low- and zero-emission vehicles have less of a need, or no need at all, to stop at our gas stations to refuel. As a result, our fueling stations sell less fuel, directly harming the company's bottom line.

8. In addition, because customers come through our stores and make retail purchases primarily when they stop to refuel, our retail sales suffer when drivers refuel less often.

9. I anticipate broader impacts on my business as revenue declines. For example, declining revenue from fuel reduces the resale value of fueling-station properties, as well as fuel sellers' ability to access capital to operate and grow a business.

10. Although one Rotten Robbie location now has electric-vehicle charging stations, revenue from these charging stations and any we might install in the future cannot replace our lost revenue from fuel and retail sales. Because most electric-vehicle drivers are able to recharge at home or at work, each of our charging stations averages only 1.5 patrons per day, compared to an average of 400 fueling transactions a day.

11. Further, because there is only a single provider of electricity in my area, I am not able to purchase the electricity for these charging stations at a competitive price and therefore cannot offer competitively priced electricity to my customers. By contrast, I can purchase fuel from multiple sources to competitively price my fuel offerings to customers.

12. The charging stations are therefore not a significant source of revenue. In fact, I anticipate that it will take over 10 years to pay back the investment made in installing the charging stations.

13. For these reasons, the waiver allowing California to implement its greenhouse-gas emission standards and zero-emission-vehicle mandate harms Robinson Oil financially.

Dated: 10/17/2022

/s/_____
Erin Graziosi

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 22-1081 (and consolidated cases)

STATE OF OHIO, *et al.*,

Petitioners,

v.

U.S. ENVIRONMENTAL
PROTECTION AGENCY, *et al.*,

Respondents.

DECLARATION OF JENNIFER M. SWENTON

I, Jennifer M. Swenton, declare under penalty of perjury that the following is true and correct to the best of my knowledge:

1. I am the Director of Optimization & Planning in the Optimization Planning and Economics division for Valero. In this role, I am responsible for a wide range of planning and economic business matters regarding Valero's operating strategies for its West Coast, Mid-Continent, and North Atlantic refinery assets. My responsibilities include management oversight of the planning and economics teams for these Valero assets, and through my background, I also have significant technical and operational experience from several of Valero's refineries.

2. I am generally aware of EPA's decision to waive federal preemption for regulations issued by the State of California under its Advanced Clean Cars I ("ACC I") program. It is my understanding that the State of California has found that both the Lower Emission Vehicle regulations and the Zero-Emission Vehicle regulations in the ACC I program reduce demand for liquid transportation fuels within the State. As I understand it, the Zero-Emission Vehicle regulations require automakers in the State to sell a minimum percentage of so-called "zero-emission vehicles," such as electric vehicles, each year (up to 22% for large manufacturers in model year 2025). 78 Fed. Reg. 2111, 2114, 2119 (Jan. 9, 2013). These "zero-emission vehicles" displace new internal combustion engine vehicles in the State that are powered by gasoline, diesel, and renewable fuels.

3. As a result of this projected displacement, the ACC I program will cause financial injury to Valero's refining business segment and, in particular, its West Coast operations, which would otherwise not occur in the absence of ACC I.

A. Valero's Overall Business Strategy

4. Unlike some other refining companies, Valero does not explore for or produce crude, i.e., it does not drill for oil. Instead, it purchases crude from third parties.

5. Valero also does not operate any retail motor fuel stations. It sells motor fuel (i.e., gasoline and diesel) at the wholesale and bulk sale levels. Valero sells motor fuels at

the wholesale level under several different channels of trade, including unbranded contract, unbranded "spot," and branded motor fuel sales. Bulk sales are made to clear the remaining refined product length from Valero's refineries to manage inventories.

B. West Coast Refineries and Refining Practices

6. There are two Valero refineries on the West Coast, and both are in California. The Valero Benicia refinery is located in Benicia (in the San Francisco Bay Area), and its Wilmington refinery is located in Wilmington (in the greater Los Angeles area). Both refineries make gasoline, diesel, jet fuel, and other petroleum products. Benicia's refined products are mostly sold in Northern California and some limited amounts in Nevada. Wilmington's refined products are typically sold in Southern California, but it also supplies some limited amounts into the Nevada and Arizona markets.

7. Most of the gasoline that the Wilmington and Benicia refineries produce is California Reformulated Gasoline Blendstock for Oxygenate Blending ("CARBOB"), which is a special RBOB formula mandated for use in the State of California. Most other states in the United States use Reformulated Blendstock for Oxygenate Blending ("RBOB") or Conventional Blendstock for Oxygenate Blending ("CBOB"), which are the two base gasoline stocks that get mixed with ethanol at the terminal racks in other states. CARBOB is considered to be a "boutique fuel," meaning it is a specialized fuel formulation that is unique to a particular market by virtue of local laws.

Compared to CBOB and RBOB, CARBOB is more expensive and complicated to produce because it requires more processing steps. For this reason, most refineries outside of California do not produce it.

8. Valero's California refineries must maintain a relatively high operating rate to remain stable, so they cannot run at low turndown rates.

9. Another major consideration for Valero's West Coast refinery operations is the logistical limitations of the availability of pipeline capacity.

10. Valero's movement of a small portion of finished product from California to another locale (such as with its production of AZRBOB for the Phoenix market) is a planned event driven primarily by existing contractual obligations for supplying gasoline to a market that is connected to California via pipeline. The Benicia and Wilmington refineries generally operate independently of the other Valero refineries. In addition, both of Valero's West Coast refineries supply CBOB to the Nevada area via third party pipelines. However, this volume is typically only a small percent of the gasoline produced in both refineries. This volume sold on pipeline is based on product demand and margins, but is limited based on line space up to the pipeline capacities.

11. Like most refineries, Valero's Wilmington and Benicia refineries have finite storage capacities. Because of this, Valero does not have the ability to store significant volumes of gasoline blendstocks and/or significantly

increase volumes of different grades of finished gasoline (CARBOB, AZRBOB, CBOB, RBOB).

12. Valero sells the majority of its CARBOB production at the rack. A rack is a distribution terminal that refiners send their gasoline to via pipeline; customers (e.g., distributors and jobbers) purchase their product at the rack by the tanker truck load. Whatever product Valero does not sell at the racks, it must sell on the bulk market to ensure that it has available space for products coming out of the refinery. Due to its limited ability to store excess inventory of CARBOB production, Valero maintains a buffer with its tankage to avoid reaching maximum inventory capacity, which it refers to as "containment." Reaching maximum capacity would require shutting down a refinery or reducing its output because there would be no place for finished product to go.

13. The West Coast has a comparatively limited spot market in part because there is not enough equipment (e.g., pipes, terminal hookups, storage tanks etc.) to move and store products efficiently and timely, and there are major logistical constraints at West Coast dock facilities. This lack of available equipment and docking facilities constrain Valero's ability to move gasoline and other petroleum products into, out of, and/or throughout California. For instance, there are a limited number of barge windows for moving product and blending components, so the barges have to compete for berth space.

14. Moreover, the Jones Act, which requires that goods shipped between U.S. ports be transported on

ships that are built, owned, and operated by United States citizens or permanent residents, limits Valero's ability to transport supplies domestically by water. Because there are a small number of Jones Act compliant barges, they are always in high demand and significantly more expensive to use than non-Jones Act vessels.

15. Valero's Wilmington refinery operates one barge dock where gasoline blendstocks can be brought into the refinery. However, finished gasoline and/or blendstocks cannot be shipped out of the refinery due to logistical and permitting constraints. This barge dock is typically used for moving distillates and other intermediates. Valero's Wilmington refinery utilizes third-party docks (berths) for feedstock deliveries. Similarly, Valero's Benicia refinery is not well-equipped for exporting product to other markets because of logistical limitations. This is partly because the refinery is located relatively far inland, presenting intervening shoals that ships and barges must navigate (therefore limiting vessel size). The Benicia refinery also has limited dock space that it balances between crude, intermediates, and products. Thus, it is rare for Valero to export gasoline outside California from either of its West Coast refineries.

C. Reduction in California Fuel Demand

16. A significant reduction in California's gasoline demand, as contemplated by the ACC I program, will detrimentally impact Valero's business and, in particular, its West Coast operations. More specifically, the reduction in demand for CARBOB and diesel attributable to the

projected market share increase of electric and hydrogen fuel cell vehicles will result in the need for California refineries to operate at lower capacities and/or to move additional gasoline and/or gasoline components to other markets. The former option naturally has a direct impact on the profitability and long-term viability of such refineries, while the latter is limited to logistical constraints and economic margins. These economic impacts are not speculative. Indeed, as California asserted in its original waiver request, the ACC I program aims to reduce emissions through "reductions in fuel production." 87 Fed. Reg. 14,332, 14,364 (Mar. 14, 2022) (quoting 2012 Waiver Request, EPA-HQ-OAR-2012-0562-0004 at 16).

17. As stated above, Valero's California refineries must operate at or above a minimum operating threshold. A significant reduction in domestic market demand in California thus risks potential refinery shutdowns and even permanent closures. In this regard, one need only consider the impact of the COVID-19 pandemic on the West Coast refining sector, which experienced negative financial margins and multiple third-party refinery closures due to the reduction in gasoline demand. However, even if operating capacity is maintained at or above the minimum operating threshold, any reduction in the California market's demand would negatively impact the profitability of Valero's California refineries, which are currently operating at close to maximum capacity (outside of required maintenance events) post-COVID as a result of normal or near-normal market demand and a reduced market supply of CARBOB stemming from third-party California refinery closures.

18. In theory, the impacts of such reduction in demand can be mitigated to some extent through exports out of California, but such mitigation efforts come with increased costs and capacity limitations. In this regard, gasoline sales from Valero's California refineries to neighboring states may be possible through the existing third-party pipelines to Arizona and Nevada markets. However, as explained above, there are additional costs associated with such pipeline use, as well as scheduling and forecasting complications, including competition with other California refiners for limited throughput capacity. An increased emphasis on exports also introduces the added logistical and planning complexities and expenses associated with balancing a gradual decrease in CARBOB production with an increasing production of other blendstocks, particularly as domestic demand decreases yet nevertheless experiences occasional changes in the market—e.g., seasonal demands and refinery turnarounds or closures. Moreover, Nevada is one of the Section 177 States, and is, therefore, expected to face similar domestic market demand reductions as California if the subject preemption waiver is not invalidated.

19. Exporting gasoline to Latin America or other markets via the shipping industry likewise requires the incurrence of additional transportation costs and is limited by dock, vessel, and permitting constraints as described above. To the extent capital investment might improve such constraints and allow for increased gasoline movements, that would nevertheless require significant expenditures by both Valero and third parties over whom Valero has no control, and would depend on business analyses and forecasts to justify said investment.

Such exports would also require California refineries to compete with barrels from the Gulf Coast, the Far East, and Europe, which have lower operating and feedstock costs, and are therefore better equipped to compete in such markets. Additionally, California is one of the most expensive operating environments for refineries, and it is not at all clear these refineries would be competitive in the markets for conventional gasoline blends.

20. In short, the subject preemption waiver for California's ACC I program is projected by California and EPA to force a rapid expansion of the new vehicle market share for electric vehicles and a corresponding reduction in California liquid fuel demand. Such a reduction in demand will negatively impact Valero's business operations and profitability as described herein.

21. All these injuries would be substantially ameliorated if EPA's decision were set aside.

Dated: October 24, 2022

/s/
Jennifer M. Swenton

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 22-1081 (and consolidated cases)

STATE OF OHIO, *et al.*,

Petitioner,

v.

U.S. ENVIRONMENTAL
PROTECTION AGENCY, *et al.*,

Respondent.

DECLARATION OF JAMES E ZOOK OF MICHIGAN CORN GROWERS ASSOCIATION IN SUPPORT OF PETITIONERS' OPENING BRIEF

I, James E. Zook, declare under penalty of perjury that the following is true and correct to the best of my knowledge:

1. I am the Executive Director of the Michigan Corn Growers Association, a nonprofit trade association based in Michigan with a membership of approximately 1,400 corn farmers, as well as their supporters and members of corn farming-related industries. We operate to promote the general commercial, legislative, and other common interests of our members.

2. I am familiar with all aspects of the Association's work and with the market for corn and products, such as ethanol, that are made using the corn grown by our members.

3. Michigan is one of the nation's leading corn producing states, with a net production of around 350 million bushels of corn. The majority of this corn is used as a feedstock for ethanol production.

4. The ethanol industry supports over 400,000 jobs in more than 25 states. Ethanol contributes more than $52 billion to the national GDP and profitably processed more than 5.1 billion bushels of corn in 2021.

5. Ethanol is the second-largest component of the fuel that powers the United States' vehicle fleet. Ethanol provides a low carbon source of energy and octane rating—the measure of a fuel to resist "knocking" in an engine—reducing vehicles' fuel usage, net greenhouse gas emissions, and the emission of toxic chemicals such as benzene. Across most of the United States, refiners add 10% ethanol to gasoline in part to raise its octane rating to a level suitable for use in most vehicles. In 2021 alone the use of ethanol reduced greenhouse gas emissions by more than 50 million metric tons, equivalent to the savings of turning off 126 natural gas-fired power plants. *See* EPA, *Greenhouse Gas Equivalencies Calculator* (Oct. 11, 2022), https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator. In California, over the last decade the use of ethanol has resulted in 26.9 metric tons of GHG emission savings.

6. The United States Environmental Protection Agency promulgated a final agency action entitled *California State Motor Vehicle Pollution Control Standards; Advanced Clean Car Program; Reconsideration of a Previous Withdrawal of a Waiver of Preemption; Notice of Decision*, 87 Fed. Reg. 14,332 (Mar. 14, 2022) ("Waiver Restoration"). This decision purports to reinstate a waiver of Clean Air Act preemption to California (and, by extension, to some seventeen other states that have opted to copy California's regulations) to impose its own greenhouse gas emissions standards for new automobiles as well to impose a zero-emissions vehicle sales quota.

7. As California explained in its original waiver request, California's regulations will reduce emissions through "'reductions in fuel production.'" 87 Fed. Reg. 14,364 (quoting 2012 Waiver Request, EPA-HQ-OAR-2012-0562-0004 at 16). Economic harm from these rules is not speculative. Indeed, California estimated "substantial reductions in demand for gasoline—exceeding $1 billion beginning in 2020 and increasing to over $10 billion in 2030." Cal. Air Resources Bd., *Staff Report: Initial Statement of Reasons for Proposed Rulemaking, Public Hearing to Consider the "LEV III" Amendments to the California Greenhouse Gas and Criteria Pollutant Exhaust Emission Standards* 201 (Dec. 7, 2011). By reducing total gasoline consumption, if gasoline remains at the current 10% ethanol blend level, ethanol demand destruction will also result.

8. While these standards are in effect, they will drive down demand for ethanol, not only in California but also in

states that have adopted California's standards: Colorado, Connecticut, Delaware, Maine, Maryland, Massachusetts, Minnesota, New Jersey, Nevada, New Mexico, New York, Oregon, Pennsylvania, Rhode Island, Vermont, Virginia, Washington, and the District of Columbia.

9. This demand destruction harms the Michigan Corn Growers Association and its members by decreasing demand for the corn they grow, particularly in California and in states that have adopted California's standards. According to the U.S. Energy Information Administration, California consumes 10% of the nation's fuel ethanol supply, which is about seven times more than ethanol plants operating within the State can produce. *See* U.S. Energy Information Administration, *California State Energy Profile* (Oct. 20, 2022), https://www.eia.gov/state/print.php?sid=CA.

10. These financial harms affect our members and also redound to the Association itself, which will lose finding it uses to pursue its mission of advocating for the interests of its members.

11. These injuries would be substantially ameliorated if EPA's decision were set aside.

Dated: October 22, 2022

/s/
James E. Zook

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 22-1081 (and consolidated cases)

STATE OF OHIO, *et al.*,

Petitioner,

v.

U.S. ENVIRONMENTAL
PROTECTION AGENCY, *et al.*,

Respondent.

DECLARATION OF JOSH ROE OF KANSAS CORN GROWERS ASSOCIATION IN SUPPORT OF PETITIONERS' OPENING BRIEF

I, Josh Roe, declare under penalty of perjury that the following is true and correct to the best of my knowledge:

1. I am the Vice President of Market Development and Policy of the Kansas Corn Growers Association, a nonprofit trade association based in Kansas with a membership of corn farmers, as well as their supporters and members of corn farming-related industries. We operate to promote the general commercial, legislative, and other common interests of our members.

2. I am familiar with all aspects of the Association's work and with the market for corn and products, such as ethanol, that are made using the corn grown by our members.

3. Kansas is one of the nation's leading corn producing states, with a net production of around 800 million bushels of corn. The majority of this corn is used as a feedstock for ethanol production.

4. The ethanol industry supports over 400,000 jobs in more than 25 states. Ethanol contributes more than $52 billion to the national GDP and profitably processed more than 5.1 billion bushels of corn in 2021.

5. Ethanol is the second-largest component of the fuel that powers the United States' vehicle fleet. Ethanol provides a low carbon source of energy and octane rating—the measure of a fuel to resist "knocking" in an engine—reducing vehicles' fuel usage, net greenhouse gas emissions, and the emission of toxic chemicals such as benzene. Across most of the United States, refiners add 10% ethanol to gasoline in part to raise its octane rating to a level suitable for use in most vehicles. In 2021 alone the use of ethanol reduced greenhouse gas emissions by more than 50 million metric tons, equivalent to the savings of turning off 126 natural gas-fired power plants. *See* EPA, *Greenhouse Gas Equivalencies Calculator* (Oct. 11, 2022), https://www.epa.govienergy/greenhouse-gas-equivalenciescalculator. In California, over the last decade the use of ethanol has resulted in 26.9 metric tons of GHG emission savings.

6. The United States Environmental Protection Agency promulgated a final agency action entitled *California State Motor Vehicle Pollution Control Standards; Advanced Clean Car Program; Reconsideration of a Previous Withdrawal of a Waiver of Preemption; Notice of Decision*, 87 Fed. Reg. 14,332 (Mar. 14, 2022) ("Waiver Restoration"). This decision purports to reinstate a waiver of Clean Air Act preemption to California (and, by extension, to some seventeen other states that have opted to copy California's regulations) to impose its own greenhouse gas emissions standards for new automobiles as well to impose a zero-emissions vehicle sales quota.

7. As California explained in its original waiver request, California's regulations will reduce emissions through "'reductions in fuel production.'" 87 Fed. Reg. 14,364 (quoting 2012 Waiver Request, EPA-HQ-OAR-2012-0562-0004 at 16). Economic harm from these rules is not speculative. Indeed, California estimated "substantial reductions in demand for gasoline—exceeding $1 billion beginning in 2020 and increasing to over $10 billion in 2030." Cal. Air Resources Bd., *Staff Report: Initial Statement of Reasons for Proposed Rulemaking, Public Hearing to Consider the "LEV III" Amendments to the California Greenhouse Gas and Criteria Pollutant Exhaust Emission Standards* 201 (Dec. 7, 2011). By reducing total gasoline consumption, if gasoline remains at the current 10% ethanol blend level, ethanol demand destruction will also result.

8. While these standards are in effect, they will drive down demand for ethanol, not only in California but also in

states that have adopted California's standards: Colorado, Connecticut, Delaware, Maine, Maryland, Massachusetts, Minnesota, New Jersey, Nevada, New Mexico, New York, Oregon, Pennsylvania, Rhode Island, Vermont, Virginia, Washington, and the District of Columbia.

9. This demand destruction harms the Kansas Corn Growers Association and its members by decreasing demand for the corn they grow, particularly in California and in states that have adopted California's standards. According to the U.S. Energy Information Administration, California consumes 10% of the nation's fuel ethanol supply, which is about seven times more than ethanol plants operating within the State can produce. *See* U.S. Energy Information Administration, *California State Energy Profile* (Oct. 20, 2022), https://www.eia.gov/state/print.php?sid=CA.

10. These financial harms affect our members and also redound to the Association itself, which will lose funding it uses to pursue its mission of advocating for the interests of its members.

11. These injuries would be substantially ameliorated if EPA's decision were set aside.

Dated: October 22, 2022

/s/
Josh Roe

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

Case No. 22-1081 and consolidated cases

STATE OF OHIO, *et al.*,

Petitioners,

v.

ENVIRONMENTAL PROTECTION AGENCY AND MICHAEL S. REGAN, IN HIS OFFICIAL CAPACITY AS ADMINISTRATOR OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY,

Respondent.

DECLARATION OF KIRK LEEDS

1. My name is Kirk Leeds. I am over 18 years of age and am competent to give this Declaration. This Declaration is based on personal knowledge. I am submitting this Declaration on behalf of the Petitioners' opening brief in the above-captioned matter.

2. I have been a member of the Iowa Soybean Association ("Association") for 33 years. I am currently the Association's Chief Executive Officer. The Association is a non-profit, nonpartisan advocacy organization that represents the interests of the state's soybean industry.

3. Bio-based diesel is produced in the United States and can either be blended with traditional petroleum diesel or used as a direct substitution. Engines burning bio-based diesel can emit fewer pollutants than engines burning petroleum diesel, and compared to petroleum diesel, bio-based diesel reduces carbon dioxide emissions on average by 74% when considering the entire lifecycle.

4. Most of the bio-based diesel in the United States is made from soybean oil, and around 30% of the soybean oil produced in the United States is used to produce bio-based diesel.

5. In March of 2022, EPA issued a Notice of Decision on its reconsideration of its previous withdrawal of a waiver for California's Advanced Clean Car Program, reinstating the waiver and allowing California to implement its light-duty vehicle greenhouse gas emission standards and zero emission vehicles requirements. Such programs are aimed at reducing the proportion of liquid fuels in California's transportation fuel mix.

6. The amount of bio-based diesel consumed in California has been steadily increasing since 2012, to up to over 400,000,000 gallons per quarter in recent years. In Quarter 1 of 2022, soy-based bio-based diesel comprised roughly 19% of all bio-based diesel consumed in California. *See* Figure 1.

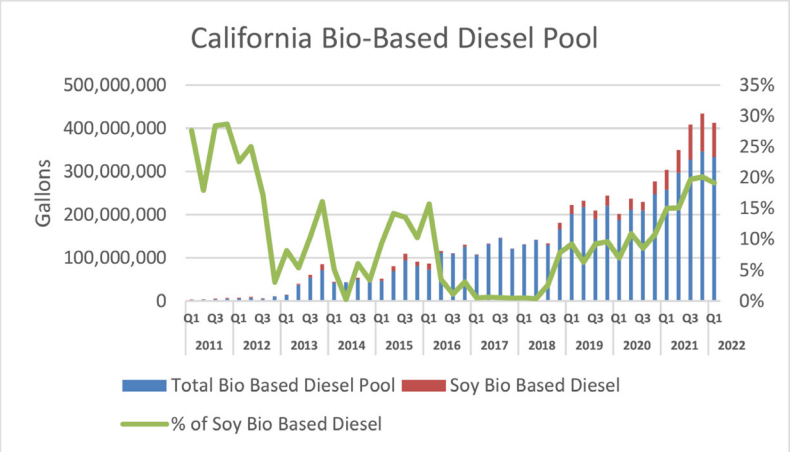

Figure 1. California Air Resources Board, LCFS Data Dashboard, *available at* https://ww2.arb.ca.gov/resources/documents/lcfs-data-dasbboard/.

7. Many of the states that will be adopting California's emissions standards under Section 177 of the Clean Air Act are also currently consuming large amounts of renewable fuels. Oregon, for example, has consumed almost 35,000,000 gallons of bio-based diesel and renewable diesel in Quarter 1 of 2022. *See* Figure 2.

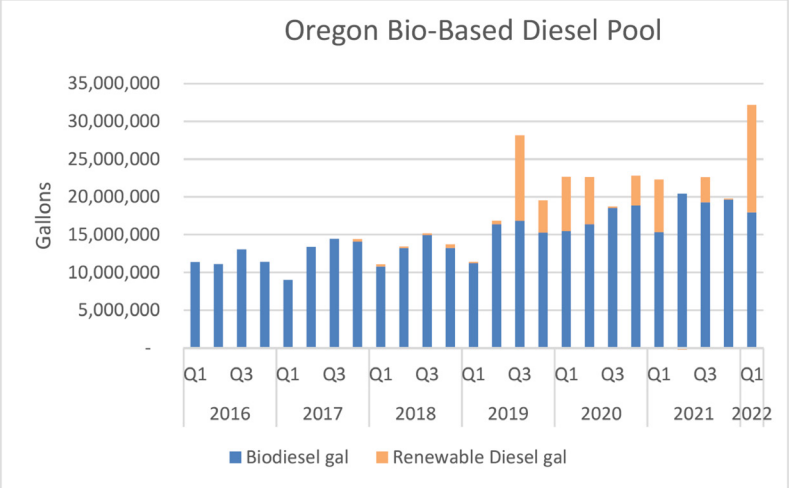

Figure 2. Oregon Clean Fuels Program, Quarterly Data Summaries, *available at* https://www.oregon.gov/deq/ghgp/cfp/Pages/Quarterly-Data-Summaries.aspx.

8. California's greenhouse gas emissions standards and zero emission vehicle mandate will reduce the demand for all liquid fuels, including bio-based diesel, which will in turn reduce the demand for the feedstocks used to produce renewable fuels, such as soybeans.

9. A reduced demand for bio-based diesel would result in great economic harm to the Association's members, as it would undermine their ability to sell soybeans at a profit.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct based on my personal knowledge.

Date: October 24, 2022

Respectfully submitted,

/s/_____
Kirk Leeds
Chief Executive Officer for the Iowa Soybean Association

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 22-1081 (and consolidated cases)

STATE OF OHIO, *et al.*,

Petitioner,

v.

U.S. ENVIRONMENTAL
PROTECTION AGENCY, *et al.*,

Respondent.

DECLARATION OF LANE HOWARD OF MISSOURI CORN GROWERS ASSOCIATION IN SUPPORT OF PETITIONERS' OPENING BRIEF

I, Lane Howard, declare under penalty of perjury that the following is true and correct to the best of my knowledge:

1. I am the Associate Director of Market Development of the Missouri Corn Growers Association, a nonprofit trade association based in Missouri with a membership of corn farmers, as well as their supporters and members of corn farming-related industries. We operate to promote the general commercial, legislative, and other common interests of our members.

2. I am familiar with all aspects of the Association's work and with the market for corn and products, such as ethanol, that are made using the corn grown by our members.

3. Missouri is one of the nation's leading corn producing states, with a net production of around 550 million bushels of corn. The majority of this corn is used as a feedstock for ethanol production.

4. The ethanol industry supports over 400,000 jobs in more than 25 states. Ethanol contributes more than $52 billion to the national GDP and profitably processed more than 5.1 billion bushels of corn in 2021.

5. Ethanol is the second-largest component of the fuel that powers the United States' vehicle fleet. Ethanol provides a low carbon source of energy and octane rating—the measure of a fuel to resist "knocking" in an engine—reducing vehicles' fuel usage, net greenhouse gas emissions, and the emission of toxic chemicals such as benzene. Across most of the United States, refiners add 10% ethanol to gasoline in part to raise its octane rating to a level suitable for use in most vehicles. In 2021 alone the use of ethanol reduced greenhouse gas emissions by more than 50 million metric tons, equivalent to the savings of turning off 126 natural gas-fired power plants. *See* EPA, *Greenhouse Gas Equivalencies Calculator* (Oct. 11, 2022), https://www.epa.gov/energy/greenhouse-gas-equivalenciescalculator. In California, over the last decade the use of ethanol has resulted in 26.9 metric tons of GHG emission savings.

6. The United States Environmental Protection Agency promulgated a final agency action entitled *California State Motor Vehicle Pollution Control Standards; Advanced Clean Car Program; Reconsideration of a Previous Withdrawal of a Waiver of Preemption; Notice of Decision*, 87 Fed. Reg. 14,332 (Mar. 14, 2022) ("Waiver Restoration"). This decision purports to reinstate a waiver of Clean Air Act preemption to California (and, by extension, to some seventeen other states that have opted to copy California's regulations) to impose its own greenhouse gas emissions standards for new automobiles as well to impose a zero-emissions vehicle sales quota.

7. As California explained in its original waiver request, California's regulations will reduce emissions through "'reductions in fuel production.'" 87 Fed. Reg. 14,364 (quoting 2012 Waiver Request, EPA-HQ-OAR-2012-0562-0004 at 16). Economic harm from these rules is not speculative. Indeed, California estimated "substantial reductions in demand for gasoline—exceeding $1 billion beginning in 2020 and increasing to over $10 billion in 2030." Cal. Air Resources Bd., *Staff Report: Initial Statement of Reasons for Proposed Rulemaking, Public Hearing to Consider the "LEV III" Amendments to the California Greenhouse Gas and Criteria Pollutant Exhaust Emission Standards* 201 (Dec. 7, 2011). By reducing total gasoline consumption, if gasoline remains at the current 10% ethanol blend level, ethanol demand destruction will also result.

8. While these standards are in effect, they will drive down demand for ethanol, not only in California but also in

states that have adopted California's standards: Colorado, Connecticut, Delaware, Maine, Maryland, Massachusetts, Minnesota, New Jersey, Nevada, New Mexico, New York, Oregon, Pennsylvania, Rhode Island, Vermont, Virginia, Washington, and the District of Columbia.

9. This demand destruction harms the Missouri Corn Growers Association and its members by decreasing demand for the corn they grow, particularly in California and in states that have adopted California's standards. According to the U.S. Energy Information Administration, California consumes 10% of the nation's fuel ethanol supply, which is about seven times more than ethanol plants operating within the State can produce. *See* U.S. Energy Information Administration, *California State Energy Profile* (Oct. 20, 2022), https://www.eia.gov/state/print.php?sid=CA.

10. These financial harms affect our members and also redound to the Association itself, which will lose funding it uses to pursue its mission of advocating for the interests of its members.

11. These injuries would be substantially ameliorated if EPA's decision were set aside.

Dated: October 22, 2022

/s/
Lane Howard

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

Case No. 22-1081 and consolidated cases

STATE OF OHIO, *et al.*,

Petitioners,

v.

ENVIRONMENTAL PROTECTION AGENCY AND MICHAEL S. REGAN, IN HIS OFFICIAL CAPACITY AS ADMINISTRATOR OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY,

Respondent,

ADVANCED ENERGY ECONOMY, *et al.*,

Intervenors.

DECLARATION OF ROCK ZIERMAN

I, Rock Zierman, declare under penalty of perjury that the following is true and correct to the best of my knowledge:

1. I am the Chief Executive Officer of the California Independent Petroleum Association ("CIPA"). CIPA is a member of the Domestic Energy Producers Alliance.

2. CIPA is a non-profit, non-partisan trade association representing approximately 300 independent crude oil and

natural gas producers, royalty owners, and service and supply companies operating in California. Our members represent approximately 70% of California's total crude oil production.

3. Because there are no pipelines that carry the crude oil that is produced in California to locations outside of the State nor is there export capacity by waterborne vessels, 100% of the crude oil produced by our members is sold within California.

4. I am generally familiar with California's standards regulating vehicular greenhouse-gas emissions and mandating zero-emission vehicles. I am also aware that earlier this year the federal government reinstated a waiver that permits the State to implement these standards.

5. I understand that California's greenhouse-gas standards and zero-emission-vehicle mandate reduce the demand for fuel in California by requiring automakers to deliver vehicles for sale in California that are more fuel efficient, as well as a minimum percentage of zero-emission vehicles, such as electric vehicles, that do not run on conventional fuels.

6. Reducing the demand for fuel harms CIPA financially. Drivers of low- and zero-emission vehicles have less of a need, or no need at all, to use liquid fuels. With more of those vehicles on the road, drivers will soon demand less fuel, wholesalers and retail locations will need less fuel from refineries, and, in turn, refineries will purchase less crude oil from CIPA's members. In short,

when the demand for fuel decreases in California, so does the demand for the crude oil our members produce.

7. Because the only consumers of our members' crude oil products are in California, a significant reduction in fuel sales in the State would significantly harm those members' bottom lines. Our members could not avoid financial harm by selling crude oil outside of California.

8. Nor could our members avoid financial harm by shifting their sales to producers of other products made from crude oil, such as plastics. As demand for liquid fuel decreases, the price of crude oil decreases and our members lose revenue because they must sell their crude oil at lower prices.

9. Financial harm to CIPA's members harms CIPA financially. Two-thirds of our budget comes from member dues and the other one-third comes from sponsorships from those same members. When our member businesses are hurting financially, CIPA collects less from those members in the form of dues and sponsorships.

10. For these reasons, the waiver allowing California to implement its greenhouse-gas emission standards and zero-emission-vehicle mandate harms CIPA financially.

Dated: October 21, 2022

/s/
Rock Zierman

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

Case No. 22-1081 and consolidated cases

STATE OF OHIO, *et al.*,

Petitioners,

v.

ENVIRONMENTAL PROTECTION AGENCY AND MICHAEL S. REGAN, IN HIS OFFICIAL CAPACITY AS ADMINISTRATOR OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY,

Respondent,

ADVANCED ENERGY ECONOMY, *et al.*,

Intervenors.

DECLARATION OF SUSAN W. GRISSOM

I, Susan W. Grissom, declare under penalty of perjury that the following is true and correct, to the best of my knowledge:

1. I am the Chief Industry Analyst for American Fuel & Petrochemical Manufacturers ("AFPM"), responsible for analyzing market and economic impacts of regulatory and statutory changes on the refining and petrochemical manufacturing industries. I have extensive experience analyzing and directing the analysis of energy markets.

2. AFPM is a national trade association representing nearly all American refining and petrochemical companies. Our 25 refining company members own and operate 86% of U.S. domestic petroleum refining capacity. These companies provide jobs, contribute to economic and national security, and enable the production of products used by families and businesses throughout the United States.

3. The refining industry supports nearly 1.8 million jobs in 42 States, plus the District of Columbia. In California, for example, the refining industry supports more than 81,000 jobs; contributes more than $28 billion to the State's economy, accounting for 1.0% of the State's GDP; generates $5.1 billion in state and local tax revenue; and generates another $222 million in federal tax revenue. All told, the refining industry contributes more than $305 billion to the United States economy.

4. Earlier this year, EPA reinstated a Clean Air Act waiver for California's regulations limiting tailpipe CO_2 emissions and mandating zero-emission-vehicle sales. The CO_2 emission limits require the sale of vehicles that use less gasoline and diesel fuel. *See* 84 Fed. Reg. 51,310 51,315 (Sept. 27, 2019) ("[A]lmost all technologically feasible reduction of tailpipe emissions of carbon dioxide is achievable through improving the fuel economy levels of the vehicles in question."); 83 Fed. Reg. 42,986, 43,236 (Aug. 24, 2018) ("Improving fuel economy is the only feasible method of achieving full compliance."). And the zero-emission-vehicle mandate requires the sale of vehicles that use no liquid fuel at all.

5. These regulations depress the demand for petroleum fuels in California and thereby harm AFPM's member companies—such as Marathon Oil, PBF Energy, Phillips 66, and Valero Energy—that operate refineries in California and produce petroleum fuels for sale in California. A refining company's bottom line depends on the market's demand for petroleum transportation fuel. AFPM's members suffer economic injury, therefore, when California imposes tailpipe CO_2 emission restrictions that result in vehicles using less fuel per mile or forces consumers to buy vehicles that do not operate on gasoline or diesel fuel.

6. These economic harms are not speculative. California itself estimated that its regulations would cause "substantial reductions in demand for gasoline exceeding $1 billion beginning in 2020 and increasing to over $10 billion in 2030." Cal. Air Resources Bd., *Staff Report: Initial Statement of Reasons for Proposed Rulemaking, Public Hearing to Consider the "LEV III" Amendments to the California Greenhouse Gas and Criteria Pollutant Exhaust Emission Standards* 201 (Dec. 7, 2011).

7. Nor are the harms limited to California. Pursuant to Section 177 of the Clean Air Act, 17 other States—Colorado, Connecticut, Delaware, Maine, Maryland, Massachusetts, Minnesota, New Jersey, Nevada, New Mexico, New York, Oregon, Pennsylvania, Rhode Island, Vermont, Virginia, and Washington—and the District of Columbia have adopted California's CO_2 emission restrictions and/or its zero-emissionvehicle mandate. As a result, the demand for gasoline and diesel fuel will

be depressed not just in California, but in each of these States as well.

8. For example, in recently promulgating regulations adopting California's CO_2 emission restrictions and zero-emission-vehicle mandate, the Minnesota Pollution Control Agency estimated that the regulations would cause "a reduction of approximately 700 million gallons of gasoline purchased by Minnesotans" over the first 10 years of implementation. Minn. Pollution Control Agency, *Statement of Need and Reasonableness, Proposed Revisions to Minnesota Rules, chapter 7023, Adopting Vehicle Greenhouse Gas Emissions Standards* 65 (Dec. 2020). Similar demand depression undoubtedly occurs in the other Section 177 States.

9. The reduced demand for gasoline and diesel fuels caused by California's waiver results in lost sales for AFPM member companies and requires them to expend resources changing feedstock and product slates, diverting fuel to other markets, and remedying supply-chain distortions.

10. For these reasons, EPA's reinstatement of California's waiver financially injures AFPM's member companies that produce gasoline and diesel fuels for sale in California and the Section 177 States.

Dated: 10/21/2022

/s/
Susan W. Grissom

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

Case No. 22-1081 and consolidated cases

STATE OF OHIO, *et al.*,

Petitioners,

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ENVIRONMENTAL PROTECTION AGENCY AND MICHAEL S. REGAN, IN HIS OFFICIAL CAPACITY AS ADMINISTRATOR OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY,

Respondent,

ADVANCED ENERGY ECONOMY, *et al.*,

Intervenors.

DECLARATION OF TRECIA CANTY

I, Trecia Canty, declare under penalty of perjury that the following is true and correct to the best of my knowledge:

1. I am the Senior Vice President, General Counsel and Secretary for PBF Energy ("PBF"). PBF is a member of the American Fuel and Petrochemical Manufacturers.

2. PBF currently owns and operates six oil refineries and related assets in the United States with a combined processing capacity of approximately 1,000,000 barrels per day, two of which are located in California. PBF acquired its first California refinery located in Torrance, California in 2016 and it has a nameplate crude capacity of 166,000 barrels per day ("Torrance Refinery"). Our newest refinery, located in Martinez, California ("Martinez Refinery"), was acquired by PBF in 2020 and has a nameplate crude capacity of 157,000 barrels per day.

3. The Torrance Refinery and the Martinez Refinery each produce liquid transportation fuels, such as diesel and gasoline, that are primarily sold within the State of California.

4. I am generally familiar with the State of California's standards regulating vehicular greenhouse-gas emissions and mandating zero-emission vehicles. I am also aware that earlier this year the federal government reinstated a waiver that permits the State to implement these standards.

5. I understand that California's greenhouse-gas standards and zero-emission-vehicle mandate will reduce the demand for fuel in California by, among other things, requiring a minimum percentage of zero-emission vehicles, such as electric vehicles, that do not run on conventional fuels.

6. Drivers of low- and zero-emission vehicles have less of a need, or no need at all, to use the fuels we produce

at the Torrance Refinery and the Martinez Refinery. The mandate requiring more low-and zero-emission vehicles on the road will result in drivers in California purchasing less fuel and, in turn, the wholesalers and retail locations that we supply in California will purchase less fuel from PBF, resulting in financial harm to our company.

7. Because the primary consumers of the products produced by the Torrance Refinery and the Martinez Refinery are in California, a reduction in fuel sales within California would directly harm the economic viability of those operations which would, in turn, adversely impact the company's financial position.

8. PBF could not avoid financial harm by selling more of its gasoline, diesel and other products outside of California. To the extent that the company would be able to sell those products outside of California, it would not be able to do so without incurring significant additional costs that it does not incur today, including operational, transportation and storage costs.

9. For these reasons, the waiver allowing California to implement its greenhouse-gas emission standards and zero-emission-vehicle mandate harms PBF financially.

Dated: 10/21/2022

/s/
Trecia Canty

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 22-1081 (and consolidated cases)

STATE OF OHIO, *et al.*,

Petitioner,

v.

U.S. ENVIRONMENTAL
PROTECTION AGENCY, *et al.*,

Respondent.

**DECLARATION OF TREVOR HINZ OF ICM, INC.
IN SUPPORT OF PETITIONERS' OPENING BRIEF**

I, Trevor Hinz, declare under penalty of perjury that the following is true and correct to the best of my knowledge:

1. I am the Director of Government and Industry Relations of ICM, Inc. ("ICM"), a Kansas corporation that is a global leader in developing biorefining capabilities, especially for the production of ethanol. Plants using ICM technology collectively produce 8.8 billion gallons annually. No other company serves more ethanol producers in the world. For over 25 years, we have been advancing the biofuel industry, protecting the environment, while helping American farmers and businesses enrich their

communities and drive value back into U.S. agriculture. Today we offer a range of products and services designed to maximize productivity, diversify revenue, and yield valuable feed co-products.

2. I am familiar with all aspects of ICM's work and with the market for ethanol that is produced by our customers and service clients.

3. The ethanol industry supports over 400,000 jobs in more than 25 states. Ethanol contributes more than $52 billion to the national GDP and profitably processed more than 5.1 billion bushels of corn in 2021.

4. Ethanol is the second-largest component of the fuel that powers the United States' vehicle fleet. Ethanol provides a low carbon source of energy and octane ratingthe measure of a fuel to resist "knocking" in an engine—reducing vehicles' fuel usage, net greenhouse gas emissions, and the emission of toxic chemicals such as benzene. Across most of the United States, refiners add 10% ethanol to gasoline to raise its octane rating to a level suitable for use in most vehicles. In 2021 alone the use of ethanol reduced greenhouse gas emissions by more than 50 million metric tons, equivalent to the savings of turning off 126 natural gas-fired power plants. *See* EPA, *Greenhouse Gas Equivalencies Calculator* (Oct. 11, 2022), https://www.epa.goy/energy/greenhouse-gas-equivalencies-calculator. In California, over the last decade the use of ethanol has resulted in 26.9 metric tons of GHG emission savings.

5. The United States Environmental Protection Agency took a final agency action entitled *California State Motor Vehicle Pollution Control Standards; Advanced Clean Car Program; Reconsideration of a Previous Withdrawal of a Waiver of Preemption; Notice of Decision*, 87 Fed. Reg. 14,332 (Mar. 14, 2022) ("Waiver Restoration"). This decision purports to reinstate a waiver of Clean Air Act preemption to California (and, by extension, to some seventeen other states that have opted to copy California's regulations) to impose its own greenhouse gas emissions standards for new automobiles as well to impose a zero-emissions vehicle sales quota.

6. As California explained in its original waiver request, California's regulations will reduce emissions through "'reductions in fuel production.'" 87 Fed. Reg. 14,364 (quoting 2012 Waiver Request, EPA-HQ-OAR-2012-0562-0004 at 16). Economic harm from these rules is not speculative. Indeed, California estimated "substantial reductions in demand for gasoline—exceeding $1 billion beginning in 2020 and increasing to over $10 billion in 2030." Cal. Air Resources Bd., *Staff Report: Initial Statement of Reasons for Proposed Rulemaking, Public Hearing to Consider the "LEV III" Amendments to the California Greenhouse Gas and Criteria Pollutant Exhaust Emission Standards* 201 (Dec. 7, 2011). By reducing total gasoline consumption, if gasoline remains at the current 10% ethanol blend level, ethanol demand destruction will also result.

7. While these standards are in effect, they will drive down demand for ethanol, not only in California but also in states that have adopted California's standards: Colorado, Connecticut, Delaware, Maine, Maryland, Massachusetts, Minnesota, New Jersey, Nevada, New Mexico, New York, Oregon, Pennsylvania, Rhode Island, Vermont, Virginia, Washington, and the District of Columbia.

8. Because ICM provides the technology and services necessary for the production of ethanol, a decrease in ethanol demand necessarily means a destruction in demand of our technologies and services. Thus, California's standards act to the financial detriment of ICM as well as other ethanol producers and stakeholders.

9. These injuries would be substantially ameliorated if EPA's decision were set aside.

Dated: October 24, 2022

/s/_____
Trevor Hinz

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

Case No. 22-1081 and consolidated cases

STATE OF OHIO, *et al.*,

Petitioners,

v.

ENVIRONMENTAL PROTECTION AGENCY AND MICHAEL S. REGAN, IN HIS OFFICIAL CAPACITY AS ADMINISTRATOR OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY,

Respondent,

ADVANCED ENERGY ECONOMY, *et al.*,

Intervenors.

DECLARATION OF VARISH GOYAL

I, Varish Goyal, declare under penalty of perjury that the following is true and correct to the best of my knowledge:

1. I am the CEO of Au Energy, a family-owned and operated business located in California. Au Energy is a member of the National Association of Convenience Stores.

2. Au Energy owns and operates 135 retail convenience stores under various brand names. All of our stores sell gasoline. These stores are all located in

California, primarily in the Bay Area but also throughout Southern California. Au Energy does not do business outside of California.

3. In 2021, 89% of Au Energy's total revenue came from fuel sales. The remaining 11% came from convenience store sales and our car washes. Across our stores, we sell between 250 and 300 million gallons of fuel per year.

4. I am generally familiar with California's standards regulating vehicular greenhouse-gas emissions and mandating zero-emission vehicles. I am also aware that earlier this year the federal government reinstated a waiver that permits the State to implement these standards.

5. I understand that California's greenhouse-gas standards and zero-emission-vehicle mandate reduce the demand for fuel in California by requiring automakers to deliver vehicles for sale in California that are more fuel efficient, as well as a minimum percentage of zero-emission vehicles, such as electric vehicles, that do not run on conventional fuels.

6. Reducing the demand for fuel harms Au Energy financially. Drivers of low- and zero-emission vehicles have less of a need, or no need at all, to stop at our gas stations to refuel. As a result, our locations that offer fueling sell less fuel, directly harming Au Energy's bottom line.

7. In addition, because customers come through our stores and make retail purchases primarily when they stop to refuel, our retail sales at our convenience stores

suffer when drivers refuel less often. For the same reason, our car-wash revenue will decrease as fewer customers stop to refuel.

8. Because so much of Au Energy's revenue derives from fuel sales, a significant reduction in fuel sales would force Au Energy to down-size significantly, including by reducing its workforce of 1,500 employees.

9. Although Au Energy is in the process of installing an electric-vehicle charging site at one of its locations, revenue from this site or others we may install in the future cannot replace our lost revenue from fuel and retail sales. Because most electric-vehicle drivers are able to recharge at home or at work, I expect these charging sites to service very few cars per day. Au Energy also leases land to another company to operate hydrogen fueling stations at seven of our locations. Because demand for hydrogen fuel is very low, these stations service only about 40 cars per day, and revenue from hydrogen fueling also cannot replace the revenue Au Energy will lose from reduced fuel and retail sales.

10. For these reasons, the waiver allowing California to implement its greenhouse-gas emission standards and zero-emission-vehicle mandate harms Au Energy financially.

Dated: 10/18/2022

/s/
Varish Goyal

Excerpt from Final Brief of State and Local Government Respondent-Intervenors in the D.C. Circuit (filed Mar. 20, 2023)

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 22-1081 and consolidated cases

STATE OF OHIO, *et al.*,

Petitioners,

v.

ENVIRONMENTAL PROTECTION AGENCY, *et al.*,

Respondents.

ORAL ARGUMENT NOT YET SCHEDULED

FINAL BRIEF OF STATE AND LOCAL GOVERNMENT RESPONDENT-INTERVENORS

* * *

B. Fuels Petitioners

Fuels Petitioners allege that EPA's Restoration Decision will reduce demand for liquid fuels by changing the vehicles sold in California and Section 177 States. Fuels Br. 16. Even assuming these allegations suffice for

injury-in-fact, Petitioners have not met the "substantially more difficult" challenge to establish causation and redressability based on the decisions of third-parties—i.e., automobile manufacturers. *Chamber of Com.*, 642 F.3d at 201 (cleaned up). Indeed, Petitioners provide *no* evidence that the Restoration Decision is the cause of the allegedly injurious manufacturer decisions about which vehicles to offer, much less that vacatur would change those decisions.

Automobile manufacturers have been planning to comply with these California standards since at least 2013, when the waiver was originally granted (and went unchallenged). And, in the litigation over the 2019 Withdrawal Decision, manufacturers told this Court they would be "*required*" to continue planning for compliance unless and until the withdrawal was affirmed—an event that never happened. Case No. 19-1230, Dkt. No. 1821514 at 11 (Dec. 24, 2019) (emphasis added); *see also* JA289, 295-297, 300. Since then, in response to surging consumer demand, manufacturers have announced plans to sell even *more* zero-emission vehicles than required by California's standards. Add97-99. They have, in fact, already done so. Add87. Manufacturers are also now preparing to comply with EPA's nationwide greenhouse gas standards. *See* 86 Fed. Reg. 74,434, 74,440 (Dec. 30, 2021) (comparing EPA's current standards to earlier standards (labeled "2012 FRM") roughly equivalent to California's).[4]

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4 There is no federal analog to California's zero-emission-vehicle standards.

Fuels Petitioners "have failed to demonstrate a substantial probability" that the *Restoration Decision*—as distinct from consumer demand and manufacturers' plans in response to the *original waiver* and EPA's new standards—would cause the injury they allege. *Chamber of Com.*, 642 F.3d at 204-06. Nor have they established any probability that manufacturers would change course if EPA's decision were vacated. *Crete Carrier Corp.*, 363 F.3d at 494; *see also* Indus. Respond. Br. 12.

* * *

ORAL ARGUMENT NOT YET SCHEDULED

No. 22-1081 & consolidated cases

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

STATE OF OHIO, *et al.*,

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Respondents.

DECLARATION OF JOSHUA CUNNINGHAM

I, Joshua M. Cunningham, declare as follows:

1. My name is Joshua M. Cunningham and I am Chief of the Advanced Clean Cars Branch of the California Air Resources Board (CARB). I make this declaration based upon my knowledge and expertise in the matters within, and upon my review of the relevant administrative proceedings, reports, and other documents discussed below.

2. My resume is attached as Exhibit A. As Chief of the Advanced Clean Cars Branch since 2015, I am responsible for a broad regulatory program that

includes emissions requirements for all new passenger vehicles sold in California. Prior to this work, I have been employed in a range of management and analytic positions at CARB since 2009. I have previously worked as a manager for the University of California at Davis's Institute of Transportation Studies, as a senior systems engineer for the United Technologies Corporations' Transportation Group, and as a product engineer for Delphi Chassis Systems, a subsidiary of General Motors at the time. Additionally, I have broad experience in automotive engineering and policy and in greenhouse gas emissions and air pollutant reduction program design and management. CARB has recognized me with a sustained superior accomplishment award. My technical work has also been recognized with an Outstanding Technical Paper of 2010 by SAE International, formerly known as the Society of Automotive Engineers, an engineering association for transportation fields. I hold a patent for fuel cell technology controls and have also received fellowships from the U.S. government for my work. I have a Masters of Science in Transportation Technology and Policy from the University of California at Davis and Bachelor of Science in Mechanical Engineering from Michigan State University. I have been directly involved in designing and analyzing greenhouse gas and other air pollution vehicle standards for CARB.

3. This declaration provides information relevant to four claims made by Petitioners: a) that vehicles that could qualify for compliance with California's zero-emission-vehicle standards (hereafter referred to as zero-emission vehicles) cannot be sold profitably, so manufacturers

will likely increase the prices of conventional vehicles (i.e., those that require gasoline or diesel to fuel an internal combustion engine) to cross-subsidize the zero-emission vehicles; b) that the price of a given vehicle is the same nationwide after accounting for transportation costs, tax differentials, and similar local factors; c) that manufacturers would change their prices and/or sell fewer zero-emission vehicles if the U. S. Environmental Protection Agency's (EPA)'s restoration of California's 2013 waiver (Restoration Decision) were vacated; and d) that increasing the number of zero-emission vehicles sold causes harm to State Petitioners. *See* Zycher Declaration 2-3 (ECF 1969895); Ohio Br. 14-15.

4. I have reviewed the articles and other information described or summarized in this declaration and have provided citations to source material so that the information can be verified, if needed. As described below, much of the vehicle price information contained herein was obtained from a publicly available website called TrueCar. TrueCar is an online platform that partners with a network of over 13,000 certified dealers nationwide (representing approximately 35% of all franchised dealers) to provide consumers with timely and comprehensive information on the pricing of vehicle sales transactions in a particular geographic area.[1] Based on my knowledge and experience, TrueCar's vehicle price information is relied upon by several reputable, independent organizations for providing transparent price information. According to TrueCar, its pricing information is updated weekly on

[1] https://www.truecar.com/faq/#where-do-you-get-your-data.

the TrueCar website and represents transactions that are the most recently available (no older than 8 weeks).[2] The pricing information contained in this declaration was obtained during the week of January 7-13, 2023. I am familiar with how the data summarized herein was obtained from TrueCar, as described below. I have reviewed the results of the inquiries.

Publicly available data suggests that there is no need to cross-subsidize zero-emission vehicle sales by increasing prices for conventional vehicles

5. Publicly available data demonstrates there is robust and growing demand for zero-emission vehicles. The national market share of light-duty vehicles that could qualify toward compliance with California's zeroemission-vehicle standards has been growing dramatically in the last few years. It has almost tripled—from 2.3% to 6.5%—between 2020 and the third quarter of 2022, with September 2022 (the last month for which data is reported) showing sales at 7.41%.[3]

6. The market share of qualifying vehicles in California is even higher—up to more than 20% in the third quarter of 2022.[4] In fact, for the calendar year 2022, almost 19% of the light-duty vehicles sold in California were battery-

[2] https://www.truecar.com/faq/#how-recent-is-your.

[3] https://www.autosinnovate.org/posts/papersreports/Get%20Connected%20Electric%20Vehicle%20Quarterly%20Report%202 022%20Q3.pdf.

[4] *Id.*

electric, plug-in hybrid, or fuel-cell vehicles, all of which qualify as zero-emission vehicles under California's regulation.[5] Most, if not all, of the sales of new vehicles in calendar year 2022 would have been model year 2022 or 2023 vehicles. For those model years, California's standards require, respectively, 14.5% or 17% of zero-emission vehicle credits under the regulations to be qualifying vehicles. Cal. Code Regs., tit. 13, § 1962.2(b)(1)(A). Zero-emission vehicles earn varying credits under California's regulations, so those percentages do not correspond directly to required sales percentages. But the zero-emission vehicles sold in calendar year 2022 exceed what California's standards require.

7. Publicly available sales data indicates that consumers are not only demanding more and more zero-emission vehicles, they are also willing to pay price premiums for them, sometimes thousands of dollars above the manufacturer's suggested retail price (MSRP). For example, the 2022 Hyundai Tucson Plug-In Hybrid is selling for a nationwide average of $2,200 above the MSRP.[6] Similarly, the 2022 Toyota RAV4 Prime (plug-in

[5] https://www.energy.ca.gov/data-reports/energy-almanac/zero-emissionvehicle-and-infrastructure-statistics/new-zev-sales.

[6] *See* https://www.truecar.com/. This data was obtained by visiting the TrueCar website (https://www.truecar.com/) and taking the following steps: First, selecting "Shop New," and then selecting a make and model of an electric or plug-in hybrid vehicle. Next, entering a zip code to search for pricing in various cities in California, Ohio, and other states. For example, for Sacramento, CA, the zip code 94203 was used. For Columbus, OH, the zip code 43085 was used. The next step is selecting the option to "Choose

hybrid) is selling for a nationwide average of $2,143 above the MSRP.[7] Additional examples include:

a. the 2023 Hyundai IONIQ 5 (battery-electric vehicle) selling for a nationwide average of $2,030 above MSRP;

b. the 2022 Toyota Prius Prime (plug-in hybrid) selling for a nationwide average of $1,021 above MSRP;

c. the 2022 Ford Mustang Mach-E (battery-electric vehicle) selling for a nationwide average of $1,416 above MSRP;

d. the 2022 Ford F-150 Lightning (battery-electric vehicle) selling for a statewide average of $3,181 above MSRP in California, and an average

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a Default Build," and finally, noting the MSRP and the market average price of each vehicle for each zip code. For many queries, the TrueCar website returned nationwide or statewide averages, and those are labeled accordingly herein. For some geographic areas for particular vehicles, the website returned only "regional" or "local" averages. For those, the major metropolitan area corresponding to the zip code used for the query is indicated as an identifier of the region in question. Additionally, in some cases a search for a particular model's "Default Build" did not return enough data points. In those cases, a different build was selected, ensuring that the selected build, trim, and options were uniform when pricing a vehicle across different zip codes.

[7] *Id.*

of $2,799 above MSRP in the region around Columbus, Ohio; and

e. the 2023 Nissan Leaf (battery-electric vehicle) selling for a nationwide average of $566 above MSRP.[8]

8. Additionally, these vehicles are frequently selling at even higher price premiums in California than in other states. For example, the 2023 Kia EV6 (battery-electric vehicle) is selling for an average of $1,017 above MSRP nationwide, while selling for an average of $2,004 above MSRP in California.[9] Similarly, the 2023 Kia Niro Plug-In Hybrid is selling for an average of $412 above MSRP in the region around Columbus, Ohio, while selling for an average of $825 above MSRP statewide in California.[10]

9. That sales data is consistent with news reports that consumers are willing to face long waits and pay above MSRP to get vehicles that could qualify under California's zero-emission-vehicle standards.[11]

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[8] *Id.*

[9] *Id.*

[10] *Id.*

[11] *See*, *e.g.*, https://www.eenews.net/articles/ev-buyers-face-long-waitsprice-hikes-above-sticker-cost/ (prices paid for electric vehicles in February 2022 "somewhere in the region of $1,400" over MSRP on average); https://www.forbes.com/sites/jimgorzelany/2022/09/09/buying-an-electric-car-bythe-numbers/?sh=7aabe073659d ("new EVs are generally selling in excess of their sticker prices, at least where they can be found in stock. . . . For example, according to *Consumer Reports*, the Kia EV6 is commonly selling for 20 percent over list price.").

10. Auto dealers profit from these over-MSRP sales because the MSRP itself is designed to provide some profit to the dealer.[12] And while dealer profits may not conclusively prove that manufacturers also profit from these sales, it is unclear why manufacturers would set or maintain the MSRPs of these vehicles so as to provide profits only to dealers. Thus, vehicles selling at prices above MSRP are likely to result in profits for both the dealers and the manufacturers.

11. Tesla, the car manufacturer that had a 65% share of all battery-electric vehicles sales in the United States in 2022,[13] has shown that sales of electric vehicles can be profitable.[14] In fact, Tesla's Securities and Exchange Commission (SEC) annual report for 2022 indicates that gross profit for Tesla's automotive sector was $20.35 billion, with $17.61 billion of that profit coming directly from automotive sales (consisting entirely of battery-electric vehicles).[15]

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[12] According to Kelly Blue Book, the "invoice price" the dealer pays the manufacturer is, on average, about 6% below the MSRP before incentives which would increase the dealer's profit. *See* https://www.kbb.com/car-advice/how-much-does-a-new-car-dealer-make-on-a-deal/.

[13] https://news.yahoo.com/us-electric-vehicle-sales-surge-154651101.html?.

[14] *See* https://asia.nikkei.com/Business/Automobiles/Tesla-earns-8-times-more-profit-than-Toyota-per-car (noting "Tesla is believed to lead the industry in terms of net profit per vehicle sold" and its "success stems largely from the profitability of each of its cars.").

[15] https://www.sec.gov/Archives/edgar/data/1318605/000095017023001409/tsla20221231 .htm.

Publicly available data indicates that the prices consumers pay for vehicles vary between, and even within, States

12. As the data above indicates, the prices of zero-emission vehicles vary across the country and are not uniform nationwide.

13. The TrueCar data shows similar geographic variation in prices for conventional vehicles, further demonstrating that vehicle pricing is not the same nationwide. For example, the 2022 Ford Escape is selling for a statewide average of $27,189 (5.2% below MSRP) in Texas and $28,136 (1.9% below MSRP) in Ohio, but $28,983 (1.1% above MSRP) in California.[16] The 2022 Ford F-150 is selling for a statewide average of $42,565 (4% below MSRP) in Ohio and $43,991 (0.8% below MSRP) in California.[17] Additional examples include:

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[16] *See* https://www.truecar.com/. This data was obtained by visiting the TrueCar website (https://www.truecar.com/) and taking the same steps as described in note 6, *supra.* For the conventional vehicles analysis, the vehicles selected were those that were popular nationwide, and particularly in Petitioner States, based on information from the Insurify website, https://insurify.com/insights/most-popular-cars-2022/, and other vehicle information available to CARB. Additionally, several sport utility vehicles (SUVs) and trucks were selected for analysis because those vehicle types were likely to make up a large percentage of Petitioner States' fleets (for example, SUVs and trucks make up 62.3% of Texas' 2021 state fleet according to https://texashistory.unt.edu/ark:/67531/metapth1364339/.) Trims and options that produced sales data that could be compared across multiple states were selected, ensuring that the selected build, trim, and options were uniform when pricing a vehicle across different zip codes.

[17] *Id.*

a. the 2022 Ford Explorer selling for a statewide average of $34,557 (6.6% below MSRP) in Texas, $35,600 (3.8% below MSRP) in Ohio, and $36,392 (1.8% below MSRP) in the Sacramento, California, local area;

b. the 2022 Chevrolet Silverado 1500 selling for a statewide average of $50,423 (5.2% below MSRP) in Texas, $51,190 (3.8% below MSRP) in California, and $51,904 (2.4% below MSRP) in Ohio;

c. the 2022 Ram 1500 selling for a statewide average of $36,980 (5.1% below MSRP) in California, $37,149 (4.7% below MSRP) in Ohio, and $37,467 (3.9% below MSRP) in Texas;

d. the 2022 Chevrolet Malibu selling for an average of $25,913 (7.1% below MSRP) in the region around Atlanta, Georgia, $26,157 (6.2% below MSRP) in the region around Columbus, Ohio, $26,546 (4.8% below MSRP) statewide in Texas, and $26,674 (4.4% below MSRP) statewide in California;

e. the 2022 Honda Civic selling for an average of $25,841 (3.2% above MSRP) in the region around Columbus, Ohio and $26,528 (5.9% above MSRP) statewide in California; and

f. the Toyota Corolla selling for a statewide average of $21,700 (1.2% above MSRP) in Texas and $22,466 (2.3% above MSRP) in California.[18]

[18] *Id.*

14. This geographic variation in vehicle pricing cannot be explained by simply taking into account the differences in transportation costs or taxes in different states. The pricing data from TrueCar does not include any applicable taxes or other fees such as title, licensing, or documentation fees, or other state or local government charges.[19] Moreover, many of the vehicle prices provided above are higher in California than in States with lower state sales tax rates, meaning the total price differences above are probably understated. Finally, the destination fee (the cost of delivering the vehicle to the dealer) is included in the TrueCar price, and, in any event, is a set amount based on the vehicle make and model and does not vary by location.[20]

15. The data from TrueCar also indicates that prices for the same vehicle vary even *within* the same state—often by thousands of dollars. For example, the data on statewide sales of the 2022 Ford F-150 in California reflected 25 sales considered to be an "excellent" price ($42,188 or less) and 14 sales considered a "high" price ($45,794 or more), with another hundred or so sales at prices between these two ranges.[21]

16. Moreover, according to information published by Consumer Reports, several aspects of manufacturers' pricing of vehicles—including rebates and dealer

[19] https://www.truecarcom/faq/#what-fees-are-included-in.

[20] *See* https://www.autotrader. com/car-tips/new-car-delivery-or-destinationcharges-explained-213280.

[21] *Id.*

incentives—can also vary regionally, resulting in prices for the same vehicle being different in different states.[22]

17. On multiple occasions, in different cases, auto dealers have argued, and sometimes even declared under penalty of perjury, that California emission standards will *increase* vehicle prices in the States that adopt California's standards—in other words, precisely the opposite effect the Zycher declaration assumes. Specifically, these dealers have stated that they fear costs associated with California's zero-emission-vehicle standards (or other California emission standards) will fall on dealers in California and States that have adopted California's standards (Section 177 States), while dealers in States *not* adopting California's standards will be able to offer the same or similar vehicles for lower prices.

18. For example, when Colorado adopted the California emission standards at issue in this case, an auto dealer association challenged that adoption and alleged: "[P]rices of new vehicles *in Colorado* are expected to rise substantially due to the adoption of California's . . . standards . . . [thus] it is likely that Colorado consumers will begin purchasing vehicles across Colorado's border to take advantage of reduced out of state prices as no neighboring states (or any nearby states) have adopted California's . . . regulations." Complaint for Judicial Review of Final Agency Action at 153-54, *Colo. Auto. Dealers Ass'n v. Colo. Dep't of Pub. Health & Env't*, No. 2019CV30343 (Dist. Ct. Denver Cnty., Jan. 28, 2019).[23]

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[22] *See* https://www.consumerreports.org/car-pricing-negotiation/guide-tocar-pricing-terms/.

[23] *See also, e.g.*, Declaration of David W. Regan at ¶ 6 (included in Standing Addendum to Petitioner's Opening Brief), *Chamber*

Manufacturers have already made a number of public commitments that undermine Petitioners' claim that their alleged injuries can be redressed

19. State Petitioners contend, albeit implicitly, that vacating EPA's Restoration Decision would reduce the prices they will pay for vehicles. But there are only two model years remaining (2024 and 2025) in which California's zero-emission-vehicle standards will require an incremental increase in sales of qualifying vehicles,[24] and manufacturers have likely already made pricing decisions for those model years. In fact, multiple manufacturers have already publicly announced suggested retail prices for a number of 2024 model vehicles. For example, Mazda has publicly announced the MSRP for the 2024 CX-90 and

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of Corn. of U.S. v. EPA, 642 F.3d 192 (D.C. Cir. 2011) (No. 09-1237) (Vice President of National Automobile Dealers Association declaring that "the California [greenhouse gas] standards would likely result in California dealers losing sales to dealers in other states or to dealers of vehicles produced by unregulated manufacturers."); Declaration of Bruce Beck at ¶ 8, *Central Valley Chrysler-Jeep v. Witherspoon*, No. CIV-F-04- 6663-REC-LJO (E.D. Cal., May 2, 2005) (owner of automobile dealership in California declaring that vehicles at his dealership "will have significant price increases because they will need design changes to meet the GHG [greenhouse gas] regulations" in California); Complaint at ¶ 6, *Green Mountain Chrysler Plymouth Dodge Jeep v. Torti*, No. 2:05-CV-302 (D. Vt., Nov. 18, 2005) (arguing that Vermont's adoption of its Low Emission Vehicle Program would have "an adverse impact on Vermont dealers" because they would have to "try to sell vehicles that cost substantially more than vehicles offered by other dealers").

[24] Cal. Code Regs., tit. 13, § 1962.2(b)(1)(A).

CX-90 plug-in hybrid.[25] Chevrolet has publicly announced the MSRP for the 2024 Chevrolet Trax,[26] and for the 2024 Blazer EV,[27] 2024 Equinox EV,[28] 2024 Corvette E-Ray,[29] and 2024 Silverado.[30] GMC has publicly announced the MSRP for the 2024 GMC Sierra EV and Sierra EV Denali Edition 1,[31] and Volvo has announced the MSRP for the 2024 EX90.[32] And a Buick dealer has publicly announced the MSRP of the 2024 Encore GX.[33]

20. Fuels Petitioners also claim that vacatur of EPA's Restoration Decision would result in fewer sales of zero-emission vehicles. As shown above, however,

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[25] https://news.mazdausa.com/2023-02-07-Mazda-Announces-Pricing-andPackaging-For-First-Ever-2024-Mazda-CX-90.

[26] https://www.chevrolet.com/upcoming-vehicles/2024-trax.

[27] https://www.chevrolet.com/electric/blazer-ev.

[28] https://www.chevrolet.com/electric/equinox-ev.

[29] https://www.chevrolet.com/upcoming-vehicles/2024-corvette-e-ray.

[30] https://www.chevrolet.com/electric/silverado-ev.

[31] https://media.gmc.com/media/us/en/gmc/home.detail.html/content/Pages/news/us/e n/2022/oct/1020-sierra-ev.html.

[32] https://www.volvocars.com/us/cars/ex90-electric/.

[33] https://www.southernbuickgmc.com/2024-buick-encore-gx-sees-refresh-with-new-styling/#:~:text=Starting%20at%20an%20MSRP%20of%20%2424%2C200%20%28plus%20destination,GX%20today%20with%20us%20at%20Southern%20Buick%20Lynnhaven.

manufacturers are already selling *more* qualifying vehicles in California than the State's standards require,[34] and consumer demand is growing both in California and nationwide.[35] Moreover, multiple manufacturers have announced plans to sell substantially more zero-emission vehicles in the future than the standards at issue in this litigation require (22% in model year 2025).[36] For example, in March 2021, Volvo announced plans to make only electric cars by 2030,[37] and Volkswagen announced that it expects half of its U.S. vehicle sales will be all-electric by 2030.[38] Honda announced a plan to fully electrify its vehicles by 2040, with 40 percent of its North American vehicle sales expected to be fully battery-electric or fuel-cell vehicles by 2030, 80 percent by 2035, and 100 percent by 2040.[39] In May 2021, Ford announced that it expects 40-percent of its global light-duty vehicle sales will be all electric by 2030.[40] In June 2021, Fiat announced a move to

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[34] *See* note 5, *supra;* Cal. Code Regs., tit. 13, § 1962.2(b)(1)(A).

[35] *See, e.g.*, notes 3, 11, *supra.*

[36] *See* Cal. Code Regs., tit. 13, § 1962.2(b)(1)(A)).

[37] https://www.media.volvocars.com/us/en-us/media/pressreleases/277409/volvo-cars-to-be-fully-electric-by-2030

[38] https://www.volkswagen-newsroom.com/en/stories/strategy-update-at-volkswagen-the-transformation-to-electromobility-was-only-the-beginning-6875.

[39] https://global.honda/newsroom/news/2021/c210423eng.html.

[40] https://media.ford.com/content/fordmedia/fna/us/en/news/2021/05/26/capital-markets-day.html.

all-electric vehicles by 2030,[41] and in July 2021 its parent corporation, Stellantis, announced an intensified focus on electrification across all its brands.[42] Also in July 2021, Mercedes-Benz announced that all its new architectures would be electric-only from 2025, with plans to become ready to go all-electric by 2030 where possible.[43] And in January 2021, General Motors announced plans to become carbon neutral by 2040, including significant investments in battery technology and a goal to shift its light-duty vehicle sales entirely to zero-emission by 2035.[44]

State Petitioners themselves are encouraging, and benefiting from, the use of electric vehicles

21. Although State Petitioners complain about costs they will allegedly incur if the number of electric vehicles driving in their States increases, many of these States have taken steps to *encourage* that driving. For example, Alabama has a program called "Drive Electric Alabama"

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[41] https://www.media.stellantis.com/em-en/fiat/press/world-environment-day-2021-comparing-visions-olivier-franois-and-stefano-boeri-in-conversation-to-rewrite-the-future-of-cities

[42] https://www.stellantis.com/en/news/press-releases/2021/julv/stellantisintensifies-electrification-while-targ eting-sustainable-double-digit-adjusted-operating-income-margins-in-the-mid-term.

[43] https://group-media.mercedes-benz.com/marsMediaSite/en/instance/ko/Mercedes-Benz-prepares-to-go-all-electric.xhtml?oid=50834319.

[44] https://cleantechnica.com/2022/01/26/gm-buries-solid-state-ev-battery-supply-chain-lede-under-historic-7-billion-auto-news/.

that it describes as a "statewide initiative coordinated by the Alabama Department of Economic and Community Affairs (ADECA) and designed to educate consumers, utility regulators, and government officials about electric vehicles, while engaging automakers and dealers, conducting infrastructure planning, and bringing jobs to Alabama."[45] That official state website actively promotes the use of electric vehicles, noting that electric vehicles are "more powerful, more practical, and more cost-effective than you think—plus they're driving our state's economic growth."[46] The website for Ohio's similar program likewise promotes the use of electric vehicles, noting that increased electric vehicle use and a statewide network of charging infrastructure will "spur economic development" in the state.[47] And Utah's website promotes electric vehicle use by pointing out that "EVs drastically reduce emissions and in turn dramatically improve air quality" and "help[ ] grow Utah's economy and high standard of living" while also providing cost savings to drivers.[48] And, as the EPA noted, electric vehicle and battery manufacturers have announced over $25 billion in new investments in State Petitioner's States in the past 18 months alone. EPA Br. 27-28.

22. Further, many of the Petitioner States have enacted some form of tax credit, rebate, or other financial

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[45] https://driveelectric.alabama.gov/about/.

[46] https://driveelectric.alabama.gov.

[47] https://drive.ohio.gov/programs/electric/electric#page=1.

[48] https://energy.utah.gov/ev/#/.

incentive to encourage electric vehicle use in their state, clearly indicating their policy support for the use of zero-emission vehicles.[49] For example, Texas's Light-Duty Motor Vehicle Purchase or Lease Incentive Program provides rebates up to $5,000 for leasing or purchasing a new electric vehicle.[50]

23. Moreover, several Petitioner States are promoting electric vehicle and battery manufacturing as an excellent opportunity for job creation and economic growth in their States. For example, South Carolina's Governor Henry McMaster touted Redwood Materials' $3.5 billion investment in an automotive battery materials manufacturing facility in his state as "the largest economic development announcement in the history of South Carolina," noting that it will create 1,500 jobs.[51] Similarly, West Virginia's Governor Jim Justice promoted Form Energy's $760 million investment in an electric vehicle battery plant in his state as "creating at least 750 jobs."[52] And Alabama's Department of Commerce secretary Greg Canfield celebrated Mercedes-Benz opening an electric

[49] See https://afdc.energy.gov/laws/state; https://www.ncsl.org/research/energy/state-electric-vehicle-incentives-statechart.aspx.

[50] https://www.tceq.texas.gov/airqualitv/terp/ld.html.

[51] https://www.sccommerce.com/news/redwood-materials-establishing-operations-berkeley-county-largest-economic-development.

[52] https://subscriber.politicopro.com/article/eenews/2022/12/23/west-virginia-plant-to-make-batteries-for-u-s-energy-grid-00075273.

vehicle battery plant factory in Alabama, stating "the next 25 years is going to be electric" and the "future of Mercedes-Benz is made in Alabama."[53] In Ohio, a $2.3 billion battery production plant owned by General Motors and LG Energy Solution has already begun production,[54] and another battery production facility worth $3.5 billion (owned by Honda and LG Energy) will be built in rural Ohio[55] following Ohio Governor Mike DeWine's public announcement that he would work with Honda and LG Energy "to ensure that they choose Ohio for this new electric battery plant."[56] And in Texas, Governor Greg Abbott announced his public support for Tesla's construction of its Gigafactory Texas, which is expected to create at least 5,000 jobs and generate over $1 billion in capital investment, noting that he "look[s] forward to the tremendous benefits that Tesla's investment will bring to Central Texas and to the entire state."[57]

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[53] https://www.amazingalabama.com/2022/08/29/mercedes-benz-launches-ev-production-in-alabama-as-new-chapter-begins/

[54] https://www.reuters.com/business/autos-transportation/gm-lg-energy-joint-venture-ohio-battery-plant-begins-production-2022-08-31/.

[55] https://abcnews.go.com/Business/wireStory/honda-lg-build-35b-battery-plant-hire-2200-91333105.

[56] https://www.reuters.com/business/autos-transportation/honda-motor-lg-energy-build-ev-battery-plant-ohio-nikkei-2022-08-29/.

[57] https://gov.texas.gov/news/post/governor-abbott-welcomes-tesla-to-texas.

24. In fact, many Petitioner States' governors have made statements indicating their intention for their State to be a leader in the transition to electric vehicles. For example, Kentucky's Governor Andy Beshear stated: "We know that electric vehicles are the way of the future, and Kentucky is going to be at the center of that transition."[58] And Arkansas's (now former) Governor Asa Hutchinson similarly stated: "Arkansas is uniquely positioned to be a leader in the electric vehicle industry."[59]

I declare under penalty of perjury pursuant to the laws of the State of California that the foregoing is true and correct and that this declaration was executed on February 10, 2023, at Sacramento, California.

/s/
Joshua M. Cunningham

[58] https://www.kentucky.gov/Pages/Activity-tream.aspx?n=GovernorBeshear&prId=1195#:~:text=Kentucky_is_at_the_red-hot_center_of_the,build_the_BlueOvalSK_battery_park_in_Hardin_County.

[59] https://governor.arkansas.gov/news-media/weekly-address/expanding-electric-vehicle-infrastructure-in-arkansas.

Excerpt from Private Petitioners' Final Reply Brief in the D.C. Circuit (filed Mar. 20, 2023)

No. 22-1081 (and consolidated cases)

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

STATE OF OHIO, *et al.*,

Petitioners,

v.

ENVIRONMENTAL PROTECTION AGENCY AND MICHAEL S. REGAN, IN HIS OFFICIAL CAPACITY AS ADMINISTRATOR OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY, *et al.*,

Respondents,

ADVANCED ENERGY ECONOMY, *et al.*,

Intervenors.

ORAL ARGUMENT NOT YET SCHEDULED

On Petition for Review from the United States Environmental Protection Agency
(No. EPA-HQ-OAR-2021-0257)

**FINAL REPLY BRIEF
FOR PRIVATE PETITIONERS**

* * *

combatting global climate change to "meet compelling and extraordinary conditions" in the State. 42 U.S.C. § 7543(b)(1)(B). Although EPA briefly argues that it can avoid both textual questions because it failed to adequately assess reliance interests when it withdrew the waiver, its 2019 analysis of reliance was more than adequate.

ARGUMENT

I. Petitioners Are Proper Parties To Bring This Challenge.

A. Petitioners Have Article III Standing.

The State respondents (but not EPA) contend that petitioners lack Article III standing to challenge the waiver reinstatement. In their view, EPA's reinstatement will not influence automobile manufacturers' production and sale decisions and will therefore have no impact on the demand for the fuel that petitioners distribute and produce. This Court should reject the implausible premise that this intensely litigated waiver reinstatement has never had and will never have a single dollar's worth of real-world impact.

1. The State respondents first suggest that market forces and inertia, rather than California's regulations, are dictating the mix of vehicles that will be sold in California and the 17 States that have adopted its standards. State Resp. Br. 13-15. Although California's regulations might not be the *only* factor in automakers' decision-making, it defies common sense to say that they are not *a* factor.

As this Court has explained, when EPA "prohibits or impedes" the use of fuel, "there is ordinarily little question" that fuel companies have standing to sue, given that a "direct regulatory impediment" stands in the way of their product's use. *Energy Future Coal. v. EPA*, 793 F.3d 141, 144 (D.C. Cir. 2015) (quotation marks omitted); *see CEI v. FCC*, 970 F.3d 372, 384 (D.C. Cir. 2020) (finding standing based on "reasonably predictable" "third-party conduct").

The State respondents' own representations contradict their current standing argument. They told EPA that reinstating California's greenhousegas standards would reduce greenhouse-gas emissions from California vehicles by reducing fuel consumption. J.A. 238. They also told EPA that the zero-emission-vehicle standards are "critical for incentivizing production and deployment of zero-emission vehicles," which do not use liquid fuel at all. J.A. 237. And even now, the State respondents and EPA both argue that California's standards are "necessary" because they will "meaningful[ly]" influence vehicle emissions. EPA Br. 74, 87; State Resp. Br. 45. For any of that to be true, the waiver reinstatement would have to affect manufacturers' behavior.

The State respondents also have their history wrong. Although California's standards were in place from 2013 through 2019, not all manufacturers irrevocably committed to them. *See* J.A. 477 (explaining that the reinstatement posed "significant lead time challenges" for future model years because Toyota had designed vehicles reflecting the standards' withdrawal). Some manufacturers have

announced plans to sell "more zero-emission vehicles than required by California's standards," State Resp. Br. 14, but notably they have intervened in defense of EPA precisely because they believe that their competitors will not follow suit. Vacating the reinstatement, they say, would put them at a "competitive disadvantage" because they have already invested in "electrified vehicle models." Industry Br. 17. The State respondents are simply wrong that automakers are moving in lockstep toward electrification and that the outcome of this litigation cannot possibly make any difference. Ryan Felton, *The EV Question for Auto Executives: How Fast To Make the Shift?* Wall. St. J. (Feb. 22, 2023), http://www.wsj.com/articles/the-ev-question-for-auto-executives-how-fast-to-make-the-shift-37254a44 ("Some companies are racing to convert entirely to electric vehicles, but others see caution flags.").

2. EPA's promulgation of new "nationwide greenhouse gas standards" does not undermine petitioners' standing. State Resp. Br. 14. As the State respondents concede, the federal standards are different from California's. *See id.* at 14 & n.4. Regardless, petitioners have separately challenged those standards. *See Texas v. EPA*, No. 22-1031 (D.C. Cir. Feb. 28, 2022). When a party "faces two, independent regulatory obstacles that can only be attacked in separate proceedings," the relevant injury is the one caused by the regulation in the case at hand, "and both the causation and redressability prongs are clearly satisfied." *Khodara Envtl., Inc. v. Blakely*, 376 F.3d 187, 194 (3d Cir. 2004) (Alito, J.).

B. Petitioners Are Within The Zone Of Interests.

EPA (but not the State respondents) argues that petitioners do not fall within the "zone of interests" protected by Section 209. EPA Br. 29. That is incorrect.

1. The zone-of-interests analysis, particularly in the APA context, is "not meant to be especially demanding." *Match-E-Be-Nash-She-Wish Band of Pottawatomi Indians v. Patchak*, 567 U.S. 209, 225 (2012) (citation omitted). There is no requirement of "congressional purpose to benefit the would-be plaintiff," and the "benefit of any doubt goes to the plaintiff." *Id.* In fact, the

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Petitioners' Proposed Supplemental Declarations in the D.C. Circuit

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

Case No. 22-1081

STATE OF OHIO, *et al.*,

Petitioners,

v.

U.S. ENVIRONMENTAL
PROTECTION AGENCY, *et al.*,

Respondents.

DECLARATION OF REGINALD MODLIN

I, Reginald Modlin, declare under penalty of perjury that the following is true and correct to the best of my knowledge:

1. I have over forty years of experience in the automobile industry. From 1972 through 2015 I served in various roles at FCA NA (Chrysler) Corporation. From 1992 to 1998 in my role as a manager for vehicle environmental affairs I directed design and development of automobiles at Chrysler, focusing on the requirements

of established emissions and fuel economy regulations. I also worked with national and state regulatory agencies on developing and understanding their emissions and fuel economy requirements.

2. From 1998 to 2015 I served as the Director of Regulatory Affairs at Chrysler. In that capacity, I ensured the compliance of Chrysler's North American products with all applicable environmental and safety regulations, including NHTSA's Corporate Average Fuel Economy (CAFE) standards, EPA's federal tailpipe emission standards, and California's Advanced Clean Cars I (ACC I) program. I also worked with national, state, and local legislatures and agencies in developing legislation and regulations regarding transportation emissions, fuel economy and safety performance, including participating in the evolution of California's vehicle emission regulations such as ACC I.

3. During the course of my career I also actively engaged in numerous private and public partnerships aimed at the identification and pursuit of alternative fuel options for automobile manufacturer compliance and innovation, such as the California Fuel Cell Partnership (formed by the California Air Resources Board, the South Coast Air Quality Management District, and the California Energy Commission), the Michigan Governor's Alternative 4 Fuel Advisory Council (under then-Governor Jennifer Granholm), the United States Council for Automotive Research, the Future Fuels Coalition, 25 X 25,, and other regional and state organizations.

4. I understand that in this case, at least one party has argued that rescinding EPA's Clean Air Act preemption waiver for California's ACC I program and thereby eliminating California's greenhouse gas (GHG) and zero emission vehicle (ZEV) standards will not influence current automobile manufacturer behavior because it is too late for manufacturers to change their production, pricing, and distribution plans for Model Year 2025.

5. Based on my experience in the automobile industry and in particular my over forty years of experience at Chrysler and working with automobile trade groups, automakers can and often do adapt their production plans for a particular model year well into the corresponding calendar year. Based on my experience, if California's vehicle GHG emission and ZEV standards were to be eliminated or made less stringent, automobile manufacturers could and at least some likely would change their production, pricing, and/or distribution plans for Model Year 2025 as late as December 2025, but at a minimum well into 2025. They have done so in the past in response to changing market and/or regulatory compliance conditions.

6. First, with regard to production decisions, automobile manufacturers do make automobile production plans years in advance, but those plans are adjustable. If California's vehicle GHG emission and ZEV standards were eliminated or altered during Model Year 2025, automobile manufacturers could adjust the production volumes of electric, internal combustion engine (ICE), or strong and mild hybrid vehicles to reflect market

demand as opposed to government mandates. Automobile manufacturers could increase their production of internal combustion engine (ICE) vehicles, or strong and mild hybrid vehicles for Model Year 2025 up until the last month of the model year's production, which often runs through the summer of the subject year, but could run through December 31, 2025.

7. Second, pricing in the automobile industry is updated on a continuous basis and price changes can be made up until the end of the applicable calendar year—*e.g.,* the end of 2025 for Model Year 2025. For example, toward the end of a model year, manufacturers may lower prices on certain vehicles in over supply. Accordingly, if California's GHG emission and ZEV standards were eliminated or altered, automobile manufactures could quickly change prices in response. To adjust for the fact that they would no longer be subject to California's 22% zero emission vehicle mandate, automobile manufacturers could lower the price of ICE vehicles in oversupply in California or Section 177 States thereby increasing demand, or they could raise prices on electric vehicles to reflect the true cost of manufacturing those vehicles.

8. Third, automobile manufacturers can also change- and historically have changed-their distribution plans across the country throughout the applicable calendar year. Distribution plans can be changed so long as re-routed automobiles are "50 state certified," which many automobiles are. If California's GHG emission and ZEV standards were eliminated or altered, automobile manufactures could re- route ICE vehicles or hybrid

vehicles to California and Section 177 States, depending on market demand and without having to take into account California's 22% zero emission vehicle mandate. Notably, market demand varies by manufacturer, meaning that even if demand for electric vehicles is higher than 22% as a whole in California, it likely will not be at that level for every single manufacturer.

9. Any one of the foregoing changes would likely result in more ICE vehicle or mild or strong hybrid vehicle sales in California and/or other Section 177 states, thereby resulting in increased consumer demand for liquid fuels in those States.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on this 28th day of September, 2023
Riverside County, California

/s/ Reginald Modlin
Reginald Modlin

Petitioners' Proposed Supplemental Declarations in the D.C. Circuit

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FOR THE DISTRICT OF COLUMBIA CIRCUIT

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STATE OF OHIO, *et al.*,

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U.S. ENVIRONMENTAL
PROTECTION AGENCY, *et al.*,

Respondents.

DECLARATION OF WALTER KREUCHER

I, Walter Kreucher, declare under penalty of perjury that the following is true and correct to the best of my knowledge:

1. I have more than thirty years of experience overseeing vehicle regulatory and legislative issues in the automobile industry, including issues related to fuel economy, fuel quality, compliance, and alternative fuels.

2. I began working for Ford in 1973 and helped Ford create its first Preliminary Corporate Average Fuel Economy Compliance program in the mid-1970s.

Eventually, I took over as vehicle energy planning manager at Ford Motor Company in Dearborn, Michigan. In that capacity, I managed compliance with NHTSA's Corporate Average Fuel Economy (CAFE) standards and negotiated CAFÉ regulatory and legislative matters with the federal government. I also monitored Ford's vehicle certification testing and helped develop Ford's CAFE reporting procedures. Furthermore, I provided technical support on all fuel economy and fuel quality matters for Ford, including serving as lead negotiator for fuel economy, fuel quality, and other related standards issued by California and the federal government.

3. Since leaving Ford in 2004, I have served as an outside consultant on automobile regulatory matters, including for NHTSA, for the Department of Transportation's John A. Volpe National Transportation Systems Center (Volpe Center), which builds, maintains, and runs NHTSA's CAFE modeling program, for the Environmental Defense Fund, and for Ford. I have also done some pro-bono work on the CAFE program for the Government Accountability Office.

4. I understand that in this case, at least one party has argued that rescinding EPA's Clean Air Act preemption waiver for California's Advanced Clean Cars I program and thereby eliminating California's greenhouse gas (GHG) and zero emission vehicle (ZEV) standards will not influence current automobile manufacturer behavior because it is too late for manufacturers to change their production, pricing, and distribution plans for Model Year 2025.

5. This is incorrect. Based on my experience in the automotive industry and in particular my decades of compliance work for Ford and on compliance-related work for federal agencies, including NHTSA and the Volpe Center, automakers can, and often do, adapt their plans for a particular model year well into a given model year. Based on my experience, if California's vehicle GHG emission and ZEV standards were to be eliminated or made less stringent, automobile manufacturers could and likely would change their production, pricing, and/or distribution plans for Model Year 2025 as late as December 2025, but at a minimum well into 2025. Indeed, they have done so in the past to take advantage of a model year's less stringent vehicle emission standards before subjecting themselves to more stringent standards applicable to subsequent model years.

6. First, with regard to production decisions, automobile manufacturers discuss and amend their fleet production mix continually throughout a model year, adjusting to real world consumer demand and sales as opposed to sales forecasts. Automobile manufacturers could therefore change their fleet composition for Model Year 2025 throughout 2025. For example, if California's GHG emission and ZEV standards were eliminated or altered during Model Year 2025, automobile manufacturers could decrease electric vehicle production or move some of their electric vehicle production for Model Year 2025 to a subsequent year. They could also increase their production of internal combustion engine (ICE) vehicles or strong and mild hybrid vehicles for Model Year 2025 up until the last month of the model year's production, which often runs

through the summer of the subject year—and again, can even be extended through December.

7. Second, pricing decisions in the automobile industry are made dynamically, and price changes can be made until the end of a given calendar year—*e.g.*, the end of 2025 for Model Year 2025. For example, toward the end of a model year, manufacturers may raise prices on certain vehicles in low supply. If California's GHG emission and ZEV standards were eliminated or altered, automobile manufacturers could quickly change prices in response. To adjust for the fact that they would no longer be subject to California's 22% zero emission vehicle mandate, automobile manufacturers could provide additional incentives to purchase ICE vehicles in California or Section 177 States by lowering the prices for those vehicles, or they could raise prices on electric vehicles to reflect the true cost of manufacturing those vehicles.

8. Third, because most automobiles are now "50 state certified" under federal and California vehicle emission standards, automobile manufacturers can also change their distribution plans throughout the applicable calendar year. If California's GHG emission and ZEV standards were eliminated or altered, automobile manufactures could re-route ICE vehicles or hybrid vehicles to California and Section 177 States, depending on market demand and without having to take into account California's 22% zero emission vehicle mandate. Notably, market demand varies by manufacturer, meaning that even if demand for electric vehicles is higher than 22% as a whole in California, it likely will not be at that level for every single

manufacturer. The overall electric vehicle market data is skewed due to all-electric manufacturers, such as Tesla, that dominate the electric vehicle market.

9. Any one of the foregoing changes would likely result in more ICE vehicle or mild or strong hybrid vehicle sales in California and/or other Section 177 states, thereby resulting in increased consumer demand for liquid fuels in those States.

10. In general, it is easier for automobile manufacturers to immediately adapt their plans in response to the relaxing of vehicle emission standards, as opposed to when standards are made more stringent, which requires more lead time.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on this 28 day of September, 2023
Oakland County, Michigan

/s/ Walter Kreucher
Walter Kreucher