ORAL ARGUMENT NOT YET SCHEDULED

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, et al.,

Respondents.

PROOF BRIEF OF STATE AND LOCAL GOVERNMENT RESPONDENT-INTERVENORS

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CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES

Pursuant to Circuit Rule 28(a)(1), the undersigned counsel provides the following information for all consolidated cases.

A. Parties and *Amici*

Except for the following, all parties, intervenors, and *amici* appearing in these consolidated cases are listed in the Corrected Proof Brief of Petitioners State of Ohio, et al. (ECF No. 1971738) and the Initial Brief of Respondents U.S. Environmental Protection Agency, et al. (ECF No. 1981480), with the exception of the following:

Amici for Respondents:

Administrative Law Professors (Professors Todd Aagaard, William Boyd, Alejandro E. Camacho, Robin Craig, Robert Glicksman, Bruce Huber, Sanne Knudsen, David Owen), the American Thoracic Society, American Medical Association, American Association for Respiratory Care, American College of Occupational and Environmental Medicine, American College of Physicians, American College of Chest Physicians, National League for Nursing, American Public Health Association, American Academy of Pediatrics, Academic Pediatric Association, California Climate Scientists (David Dickinson Ackerly, Maximilian Auffhammer, Marshall

Burke, Allen Goldstein, John Harte, Michael Mastrandrea, LeRoy Westerling), Chairman of the U.S. Senate Committee on Environment and Public Works (Senator Tom Carper), Ranking Member of the U.S. House Committee on Energy and Commerce (Representative Frank Pallone, Jr.), Professor Leah M. Litman, and South Coast Air Quality Management District.

B. Rulings Under Review

The agency action under review is 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. 14332 (Mar. 14, 2022).

C. Related Cases

There are no related cases within the meaning of Circuit Rule 28(a)(1)(C).

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GLOSSARY

Admin. Law Profs. Amicus Br.	Brief of Administrative Law Professors As *Amici Curiae*, ECF No. 1982317
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Carper-Pallone Amicus Br.	Brief of *Amici Curiae* Senator Tom Carper and Representative Frank Pallone, ECF No. 1982213
Climate Scientists Amicus Br.	Brief of *Amici Curiae* California Climate Scientists, ECF No. 1981964
EPA	U.S. Environmental Protection Agency
EPCA	Energy Policy and Conservation Act of 1975
Fuels Br.	Brief of American Fuel & Petrochemical Manufacturers, et al., ECF No. 1970360
Indus. Respond. Br.	Initial Brief for Industry Respondent-Intervenors
JA	Joint Appendix
Litman Amicus Br.	Brief of Professor Leah M. Litman as Amicus Curiae, ECF No. 1982322
NHTSA	National Highway Traffic Safety Administration
Ohio Br.	Brief of State of Ohio, et al., ECF No. 1969895
Restoration Decision	"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. 14332 (Mar. 14, 2022)
Section 177 States	States that have adopted California's vehicular emission standards pursuant to 42 U.S.C. § 7507

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South Coast Amicus Br.	Brief of *Amicus Curiae* South Coast Air Quality Management District, ECF No. 1982344
Withdrawal Decision	"The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program," 84 Fed. Reg. 51310 (Sept. 27, 2019)

INTRODUCTION

California experienced its first severe smog event in 1943, when Los Angeles was choked with smoky fog so thick that visibility was limited to three city blocks. When California scientists eventually discovered that the chemicals in vehicle exhaust were reacting with the State's ample sunshine to create smog, California took action: it mandated the Nation's first controls on vehicle emissions. Those new standards spurred technological innovation, including the development of the now-ubiquitous catalytic converter.

When Congress later enacted legislation to launch federal emissions regulations, it recognized that California's "already excellent program" was serving as a "laboratory for innovation" for the Nation, and Congress did not want to stand in its way. *Motor & Equip. Mfrs. Ass'n, Inc. v. EPA* ("*MEMA I*"), 627 F.2d 1095, 1109-11 (D.C. Cir. 1979). So Congress allowed California to continue to develop its own program, subject to the approval of federal regulators. Because automobile manufacturers expressed concerns about a patchwork of too many programs, however, Congress preempted other States from designing distinct regimes and instead allowed them to choose to adopt standards identical to California's. That balanced approach would let California (and other States that opt in) test out new standards—

and require new technologies—in their markets, without requiring deployment of emerging technologies nationwide in one fell swoop, and without subjecting manufacturers to more than two regulatory programs.

For more than fifty years, this design has operated as intended. EPA has granted California more than seventy-five waivers of preemption under Section 209(b) of the Clean Air Act. This has enabled California to combat not only smog, but also other pollutants when scientists later came to understand their dangers as well. California's program has galvanized remarkable innovation in pollution control technologies—including, most recently, vehicles that emit *no* tailpipe pollution of any kind. Seventeen other States (so-called "Section 177 States") have chosen to adopt California's standards as their own, concluding that these standards best protect their residents and natural resources. Other States have made the opposite choice, and EPA's federal standards apply in their jurisdictions.

Now, however, State Petitioners assert that this half-century of law and practice violates the Constitution, pointing to the equal sovereignty principle articulated in *Shelby County v. Holder*, 570 U.S. 529 (2013). But Section 209(b) raises no equal sovereignty concerns because, unlike federal preclearance requirements for state voting laws, Congress's regime for regulating interstate commerce in new motor vehicles does not intrude upon

any sensitive area of state policymaking. Rather, the regulation of interstate commerce has *always* been a paramount federal power not reserved to the States, and Congress has long deployed its commerce power to regulate economic matters differently in different states. Besides, Congress's decision to allow California's singular and successful state program to continue was amply justified, particularly in light of the State's acute pollution challenges—which continue to this day despite substantial progress.

Petitioners also attack the merits of EPA's 2022 decision to restore a 2013 waiver for California's greenhouse gas and zero-emission-vehicle standards. But no Petitioner has established an injury traceable to EPA's action, let alone one that can be redressed here. And EPA had no choice but to restore California's waiver because its 2019 withdrawal exceeded the agency's authority. EPA properly exercised its authority in 2013, and again in 2022, to allow California to implement innovative standards to control multiple pollutants—including smog, particulate matter, and greenhouse gases—that severely threaten California. Far from undermining the need for this waiver, the fact that these pollutants also threaten other States, albeit differently, demonstrates the wisdom of Congress's decision to preserve a testing ground for advanced pollution control technologies from which the

whole Nation can ultimately benefit. EPA has long understood this, and Congress has twice ratified this understanding, expanding California's discretion to design a comprehensive program. Congress has also repeatedly embraced the very California standards at issue here. This Court should reject Petitioners' efforts to use the Clean Air Act to halt technological advancement and upend longstanding regulations selected by 18 States as their preferred protection against harmful vehicular pollution.

STATUTES AND REGULATIONS

Pertinent statutes and regulations not reproduced in the addenda to Petitioners' and Respondents' briefs are reproduced in the addendum to this brief.

STATEMENT OF THE CASE

State Respondent-Intervenors adopt EPA's Statement of the Case.

SUMMARY OF ARGUMENT

These petitions should be dismissed for lack of standing or denied on their merits.

1. Petitioners lack standing.

a. State Petitioners allege a constitutional injury to their sovereignty. But they identify no way in which Section 209(b) interferes with any state authority they wish to exercise. And they seek a remedy—the

application of *federal* law nationwide—that would decrease the authority of all States, including by stripping away authority other States have been exercising for over half a century. State Petitioners also allege California's zero-emission-vehicle standards will injure them by raising the prices they pay for conventional vehicles. But publicly available information and peer-reviewed economic literature contradict their unsubstantiated assumptions.

b. Fuels Petitioners allege injuries from increased sales of vehicles that use less or no liquid fuel. But they fail to establish that the Restoration Decision—as opposed to surging consumer demand for zero-emission vehicles, long-term plans made in response to the original 2013 waiver, and rigorous federal standards—is the cause of these alleged injuries, much less that automobile manufacturers would sell different vehicles if Petitioners obtain vacatur.

2. Turning to the merits, Section 209(b) does not implicate, let alone violate, the equal sovereignty principle articulated in *Shelby County*. Like numerous other instances where Congress has elected to allow certain States to regulate specific commercial conduct, this regime does not intrude "into sensitive areas of state and local policymaking," 570 U.S. at 545—such as the regulation of state and local elections—that the Constitution's Framers "intended the States to keep for themselves," *id.* at 543. Moreover,

Congress's decision to allow California to continue with its own regulatory program for motor vehicle emissions is more than "sufficiently related to the problem that it targets," *id.* at 551, because of California's severe challenges with air pollution and because California was the only State with such a program (and relevant expertise).

3. As EPA explains, its Restoration Decision should be affirmed because it corrects the Withdrawal Decision's failure to adequately consider the substantial reliance interests that had attached to the 2013 waiver. EPA Br. 53-58; *see also* Indus. Resp. Br. 13-20. EPA's Restoration Decision should also be affirmed because the Withdrawal Decision exceeded EPA's authority and was untimely. Section 209(b) does not permit EPA to withdraw a waiver six years after granting it, particularly in the absence of any changes in factual circumstances undermining the agency's original findings.

4. If the Court reaches the substantive bases for EPA's Restoration Decision, that decision should be affirmed.

a. EPA correctly rejected the Withdrawal Decision's determination that, under Section 209(b)(1)(B), California "does not need such State standards to meet compelling and extraordinary conditions," 42

U.S.C. § 7543(b)(1)(B), reaffirming the three contrary determinations it had made in 2013:

i. EPA returned to the interpretation it has applied to Section 209(b)(1)(B) determinations from its earliest waiver proceedings—asking whether California still has compelling and extraordinary conditions for which it needs a separate regulatory program—and concluded California does still have that need. Petitioners' preferred interpretation—under which EPA would consider California's need for each individual standard—ignores Congress's deliberate program-level design, fails to give each of the three Section 209(b)(1) criteria distinct meaning, inserts an atextual pollutant-specific prohibition, and overlooks Congress's ratification of EPA's traditional approach.

ii. EPA nonetheless also applied Petitioners' single-standard interpretation and concluded, correctly, that California needs its greenhouse gas and zero-emission-vehicle standards to address compelling and extraordinary criteria pollution conditions.[1] California has always maintained, and the record has always demonstrated, that zero-emission-vehicle standards are essential for the State's efforts to address its acute

[1] Criteria pollutants are those listed by EPA pursuant to 42 U.S.C. § 7408(a), including ozone and particulate matter, EPA Br. 12.

smog and particulate matter challenges. And while Petitioners claim the criteria pollution benefits of California's greenhouse gas standards are "trivial," those reductions are unequivocally needed by the millions of Californians who experience the worst air quality in the Nation.

iii. EPA also correctly concluded that, under Petitioners' single-standard interpretation, California needs its greenhouse gas and zero-emission-vehicle standards to address compelling and extraordinary climate change conditions. The State is already facing extreme wildfires, droughts, and heat events; reduced water supplies for its residents, its farms, and its ecosystems; and air quality impacts that are aggravating the State's already severe challenges to protect public health. Congress did not design the waiver provision to prevent progress toward addressing these threats simply because that progress is incremental.

b. EPA also correctly rejected the Withdrawal Decision's reliance on a different agency's (now withdrawn) determination that California's greenhouse gas and zero-emission-vehicle standards are preempted by the Energy Policy and Conservation Act of 1975 (EPCA), reaffirming that waiver decisions should be based only on the three criteria Congress provided in Section 209(b).

5. Finally, this Court should decline to entertain Petitioners' claim that these California standards are preempted by EPCA. That issue is not properly presented in these petitions for review of EPA's *Clean Air Act* decision. Any such direct preemption challenge to these state standards must be brought in a proper trial court, if at all. If the Court does reach this claim here, it should reject it, just as other courts have done.

ARGUMENT

I. PETITIONERS LACK STANDING

Petitioners bear the burden to establish the elements of Article III standing: a concrete and particularized injury that is both "fairly traceable to the challenged action" (rather than "the result of the independent action of some third party") and redressable by the Court. *Chamber of Comm. v. EPA*, 642 F.3d 192, 200 (D.C. Cir. 2011) (cleaned up). No Petitioner has met these burdens.

A. State Petitioners

State Petitioners allege two forms of injury—constitutional and monetary. Ohio Br. 14. Neither theory supports standing for the claim or relief for which it is proffered. *See DaimlerChrysler Corp. v. Cuno*, 547 U.S. 332, 353 (2006).

State Petitioners assert that Section 209(b) causes them "constitutional injury," Ohio Br. 15, by allowing only California to set new motor vehicle emissions standards. But Petitioners fail to clear even the low bar of alleging they would set such standards "were they so able." *See Ne. Fla. Chapter of Associated Gen. Contractors of Am. v. City of Jacksonville, Fla.*, 508 U.S. 656, 668 (1993); *see also Ohio v. Yellen*, 53 F.4th 983, 993 (6th Cir. 2022) (rejecting standing because "Ohio never established any particular conduct it wishes to pursue"). Unlike the plaintiff in *Shelby County*, State Petitioners do not claim to be injured by, or seek to remove, a federal barrier to changing their own laws. 570 U.S. at 549. Instead, they seek to prevent *other States* from adopting and implementing their own laws by making *federal* law exclusive—an outcome that would only *reduce* state power. Litman Amicus Br. 29-30.

State Petitioners' economic injury claims fare no better. They allege no injury from California's greenhouse gas standards. EPA Br. 24. And their allegations of injuries from California's zero-emission-vehicle standards are both unsubstantiated, *id.* at 24-27, and wrong.

State Petitioners claim that California's zero-emission-vehicle standards will cause them to pay higher prices for conventional vehicles in

the future. Ohio Br. 14-15.[2] They notably do not describe how or when the prices for their state-fleet vehicles are determined, and have not, therefore, established that those prices remain to be negotiated for model years 2024 or 2025.[3] In any event, Petitioners' theory of generalized price increases rests on erroneous premises: (1) California's mandate to sell zero-emission vehicles demonstrates, by itself, that those sales are unprofitable, Ohio.Add.41, 42-43; (2) "manufacturers must increase the cost of conventional vehicles" in California to offset those unprofitable sales, Ohio Br. 14; and (3) those increases must apply nationwide because vehicle prices must be the same everywhere, *id.*

Petitioners' standing theory fails from the start because auto dealers in California (and elsewhere) are selling record numbers of zero-emission vehicles at profitable prices. Add87-91. Indeed, sales in 2022 exceeded those required by California's standards, indicating that robust consumer

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[2] State Petitioners allege other economic harms from expanded use of electric vehicles. Ohio.Add.53; Ohio Br. 15. But many of these States actively encourage the production and use of electric vehicles, undermining any claims of injury, causation, and redressability. Add99-103.; *see also* EPA Br. 27-28.

[3] The standards at issue here do not require further increases in sales of zero-emission vehicles after model year 2025, 78 Fed. Reg. 2112, 2114 (Jan. 9, 2013), for which sales can begin as early as January 2, 2024, Cal. Health & Saf. Code § 39038.

demand, rather than the mandate, is driving sales (and prices). Add87-88. Moreover, the mere existence of a sales mandate does not prove that required sales are unprofitable. Notably, several parties here attest that they produce and sell renewable fuels "profitably" under a federal mandate. *E.g.*, Fuels.Add.16 ¶ 4; *see also id.* at 19-25, 51 ¶ 9.

And, even if some zero-emission vehicles were sold at a loss, the peer-reviewed economic literature contradicts Petitioners' unsubstantiated assertion that manufacturers would respond by increasing conventional vehicle prices. An automobile manufacturer facing such a loss has several options, and the least expensive (and, thus, most attractive) is to accept a short-run reduction in profits in order to invest in the innovation necessary to produce compliant vehicles consumers want to buy. Add117-118.

Finally, State Petitioners' contention that prices would rise *in their States*—because vehicle prices must be the same nationwide, Ohio.Add.43-44—is belied by both economic theory, Add110-114, and publicly available data. The prices paid for a given vehicle model vary—sometimes by thousands of dollars—within a single State and between different States. Add91-95. And auto dealers, who negotiate the prices for most consumer vehicle purchases, have repeatedly asserted that California's standards drive

up prices in States that adopt those standards *but not elsewhere*. *Chamber of Com.*, 642 F.3d at 201; *see also* Add95-96.

State Petitioners have not plausibly alleged they face price increases, much less shown that any such increases are caused by California's standards or the Restoration Decision. *Chamber of Com.*, 642 F.3d at 205. Nor is there any evidence that vacatur would provide relief. *See* Case No. 19-1230, Dkt. No. 1821514 at 3 (Dec. 24, 2019) (manufacturers asserting theirs is a "long lead-time industry"); Add96-97; *see also Crete Carrier Corp. v. EPA*, 363 F.3d 490, 494 (D.C. Cir. 2004).

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* JA___, ___-___[R-133_AppendixD_2,8-10], ___[R-133_AppendixE_2]. 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]

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

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

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.

II. NEITHER SECTION 209(b) NOR EPA'S RESTORATION DECISION VIOLATES THE EQUAL SOVEREIGNTY PRINCIPLE

A. Section 209(b) Does Not Implicate Equal Sovereignty

Seeking to end state pollution control programs that have operated for more than half a century, and with no explanation for their delay, State Petitioners claim *Shelby County*'s equal sovereignty principle invalidates the balance Congress struck between federal and state regulation of new motor vehicle emissions. Ohio Br. 23-25. But equal sovereignty is not implicated by Congress's conclusion, under the Commerce Clause, that California's program should serve as a limited-market alternative to the federal program. Rather, the "fundamental principle of equal sovereignty among the States" is implicated only by federal intrusion into the "sensitive areas of state and local policymaking"—such as the power to regulate state and local elections—that the "the Framers … intended the States to keep for themselves, as provided in the Tenth Amendment." *Shelby Cnty.*, 570 U.S. at 543-45 (cleaned up).

Petitioners assert that the equal sovereignty principle constrains *every* Congressional action, *e.g.*, Ohio Br. 12, but no court has ever adopted this view, EPA Br. 38. Petitioners purport to rely on equal footing doctrine cases, but those cases concern only conditions on state admission into the Union, and are, thus, inapplicable here. EPA Br. 47-48. In any event, that doctrine, too, protects only against Congress's intrusion into the powers that were "exclusively within the sphere of state power" at the Framing—such as the power to choose the location of a State's capital. *Coyle v. Smith*, 221 U.S. 559, 568, 574 (1911). Congress may, therefore, impose conditions on a State's admission where its power "extend[s] to the subject"—as with the "regulation of commerce"—even though such conditions apply to a single State. *Id.* at 574; *see also* Litman Amicus Br. 8-11.

Shelby County applied the equal sovereignty principle to Congress's 2006 reenactment of Section 4 of the Voting Rights Act because it required certain States—with particular histories of discrimination—to obtain federal preclearance before they could exercise their reserved sovereign power to regulate elections. 570 U.S. at 543. By contrast, Section 209(b) does not intrude on any such sensitive state power, much less "punish" disfavored States "for the past." *See id.* at 553. Section 209(b) concerns only interstate commerce—the regulation of which was the federal power most "universally

assumed to be necessary," and most "readily relinquished" by the States. *H. P. Hood & Sons, Inc. v. Du Mond*, 336 U.S. 525, 534 (1949).

The Commerce Clause grants Congress the powers to "choose the commodities and places to which its regulation shall apply," to "consider and weigh relative situations and needs," and to determine that "limited applications" of its regulations will benefit the Nation. *Currin v. Wallace*, 306 U.S. 1, 14 (1939). Having chosen to regulate the emissions of new motor vehicles, Congress weighed manufacturers' fears of facing fifty-one different regulatory programs against the risks of snuffing out the state "laboratory for innovation" upon which the federal government had already "drawn heavily." *MEMA I*, 627 F.2d at 1109-11. Congress chose not to shutter that laboratory so that manufacturers, States, and the Nation could continue to benefit from pilot-testing of new technologies. *Id.*[5] Far from intruding into any sensitive area of reserved state sovereignty, Congress stayed squarely on its side of the line that "divid[es] sovereign authority between the States and the federal government." *See* Ohio Br. 18.

[5] California's program has, in fact, continued to spur significant innovation in emission-control technologies, providing precisely the benefits Congress intended. JA___-___[R-133_AppendixF_MJBradley_1-22].

Petitioners argue that *Shelby County*'s application of its equal sovereignty principle to Fifteenth Amendment legislation demonstrates that the principle "retains all its strength" against all exercises of Congress's other powers. Ohio Br. 25. To the contrary, *Shelby County* demonstrates that the Fifteenth Amendment's "expansion of federal power," *Gregory v. Ashcroft*, 501 U.S. 452, 468 (1991), enables precisely the intrusion into "spheres of autonomy previously reserved to the States," *Fitzpatrick v. Bitzer*, 427 U.S. 445, 455 (1976), that can implicate the equal sovereignty principle. Because the Fifteenth Amendment opened *new* doors for Congress to intrude into the States' core sovereignty, Congress must meet a higher bar—enacting only "appropriate" enforcement legislation—when doing so. U.S. Const. amend. XV, § 2; *see also* Ohio Br. 24.[6] Nothing in *Shelby County* suggests that States are "entitle[d] to complete sovereign equality," Ohio Br. 25, with respect to subjects that were never reserved to the States in the first place.

Finally, Petitioners do not explain how federalism, generally, or state sovereignty, specifically, would be enhanced by terminating regulatory

[6] The Commerce Clause contains no similar limitation, or, indeed, any uniformity constraint of the kind imposed on certain other Article I powers. EPA Br. 33-34.

programs operating in 18 States or by requiring that States yield all regulation to the *federal* government.[7] *See* Litman Amicus Br. 22. By seeking to *extend* the scope of federal preemption, Petitioners concede that Congress holds the paramount power to preempt, or not, in this area. *E.g.*, Ohio Br. 28. That should end the matter. *See Shelby Cnty.*, 570 U.S. at 543 ("*Outside the strictures of the Supremacy Clause*, States retain broad autonomy in structuring their governments and pursuing legislative objectives.") (emphasis added).

B. Congress's Tradition of Enabling Differential State Authority Contradicts Petitioners' Expansive Theory

Congress's history and tradition of using its Article I powers to permit some, but not all, States to regulate specified commercial conduct further confirms that *Shelby County*'s equal sovereignty principle does not have the sweeping application Petitioners posit.

When Congress decides to preempt state law, it frequently allows existing state programs to remain in place, as it did in 1967 with California's vehicular emissions program. EPA Br. 34; *see also United States v. Sharpnack*, 355 U.S. 286, 290-92 (1958) (describing long history of

[7] *See* https://ww2.arb.ca.gov/sites/default/files/2022-05/%C2%A7177_states_05132022_NADA_sales_r2_ac.pdf, last visited Jan. 19, 2023.

Assimilative Crimes Act permitting application of state laws in federal enclaves only if state laws existed when Act was passed). This necessarily results in early regulators exercising authority that other States lack. *Compare Concentric Network Corp. v. Com.*, 897 A.2d 6, 15 (Pa. Commw. Ct. 2006), *aff'd,* 922 A.2d 883 (2007) (preexisting state law exempt from preemption under Internet Tax Freedom Act), *with City of Eugene v. Comcast of Oregon II, Inc.*, 263 Or. App. 116, 145 (2014), *aff'd,* 375 P.3d 446 (2016) (rejecting application of same exemption to later-enacted law).

Congress has also "affirmatively grant[ed] certain States broad jurisdiction to prosecute state-law offenses committed by or against Indians in Indian country," while allowing other States to "opt in" only with "tribal consent." *Oklahoma v. Castro-Huerta*, 142 S. Ct. 2486, 2499 (2022) (citing 25 U.S.C. § 1321). And Congress has allowed Texas alone to keep its electric grid largely disconnected from the rest of the Nation and to exercise authority over aspects of its grid that other States lack. 16 U.S.C. §§ 824k(k)(1), 824p(k), 824q, 824t(f). *See also United States v. Louisiana*, 363 U.S. 1, 35, 65 (1960) (upholding Congress's decision to authorize Texas to "exercise jurisdiction and control" over more submerged lands than other States); 49 U.S.C. § 31113(a) (preempting all States but Hawaii from regulating commercial motor vehicle widths on federal highways); Pub. L.

No. 112-55 § 211, 125 Stat. 552, 695 (2011) (granting four jurisdictions the option to govern public housing differently than all others); EPA Br. 35 (providing other examples); Litman Amicus Br. 23 (same).

The Constitution also explicitly gives Congress the power to approve interstate compacts that increase signatories' "political power." *Virginia v. Tennessee*, 148 U.S. 503, 519 (1893). Thus, Congress regularly assents to compacts that provide authority—including the authority to override otherwise applicable federal rules—to some, but not all, States. For example, Congress consented to a multi-state compact with "[t]he primary purpose" of superseding federally proscribed dairy prices. *New York State Dairy Foods, Inc. v. Ne. Dairy Compact Comm'n*, 198 F.3d 1, 4 (1st Cir. 1999). Congress also assented to compacts authorizing certain States to discriminate against waste from non-compacting States—"an unexceptionable exercise of Congress' power to authorize the [selected] States to burden interstate commerce." *New York v. United States*, 505 U.S. 144, 150-52, 171 (1992). *See also* Litman Amicus Br. 25-27.

None of this is new. Early Congresses frequently assented to exercises of authority by one or more States without extending the same privileges to others. *E.g.*, Act of Aug. 11, 1790, ch. 43, 1 Stat. 184 (consenting to state tonnage fees); Act of Mar. 30, 1802, ch. 13 § 19, 2 Stat. 145 (authorizing

Tennessee to maintain a road on Native American tribal lands "under the direction or orders of the governor"); Act of Mar. 8, 1806, ch. 14, 2 Stat. 354-55 (authorizing New York and Pennsylvania courts to handle "complaints and prosecutions for fines, penalties, and forfeitures" under federal law); *see also Fort Leavenworth R. Co. v. Lowe*, 114 U.S. 525, 528 (1885) (upholding Congressional commitment allowing Kansas, but not other States, to "tax railroad, bridge, and other corporations" within Native American reservation); Litman Amicus Br. 24-25.

As these examples illustrate, State Petitioners err when they claim that Congress must ensure all States have equal authority whenever "it acts pursuant to its enumerated powers." Ohio Br. 12. And neither of Petitioners' limiting principles provides a fix. They first assert it is "critical" that differential treatment must be "*unrelated to sovereign authority*." Ohio Br. 25-26. But this fails to explain any of the examples described above. It also fails to explain Petitioners' concession that Congress may constitutionally "direct[] funding to projects in particular States," Ohio Br. 25, given that Congress may condition such funding "upon compliance … with federal statutory and administrative directives" which can constrain or enhance state authority. *S. Dakota v. Dole*, 483 U.S. 203, 206 (1987) (cleaned up). State Petitioners then narrow their theory further,

acknowledging that Congress may "empower[] a single State to regulate an issue of unique concern to that State." Ohio Br. 27. They fail to explain why this exception does not cover Section 209(b) itself, EPA Br. 50-51, much less why Congress has never provided—and the Court has never required—any such justification for other examples of differential state authority, including those described above.

State Petitioners cannot locate a meaningful and workable line that supports their theory. But the Constitution supplies a line: the one the Framers drew when they conferred certain powers upon Congress and reserved others to the States. The equal sovereignty principle simply has no role to play where, as here, Congress has not crossed that line.

C. Section 209(b) and the Restoration Decision Both Survive Any Heightened Review

Even if equal sovereignty were implicated here, Section 209(b) and the Restoration Decision are "sufficiently related to the problem" targeted. *Shelby Cnty.*, 570 U.S. at 551. Petitioners have forfeited any contrary argument, EPA Br. 40, and, regardless, such an argument would fail.

The Clean Air Act serves the core federalism interests of local control and accountability by minimally preempting state regulation of motor vehicle emissions. Congress expressly left *all* States free "to adopt in-use

regulations"—like carpool lanes and idling restrictions—that control the emissions of vehicles *after* their sale. *Engine Mfrs. Ass'n v. EPA*, 88 F.3d 1075, 1094 (D.C. Cir. 1996) (citing 42 U.S.C. § 7543(d)); *see also State ex rel. Yost v. Volkswagen Aktiengesellschaft*, 165 Ohio St. 3d 213, 217 (2021), *cert. denied*, 142 S. Ct. 515 (2021). For *new* motor vehicles, Congress tailored preemption to balance manufacturers' fears of "51 different standards," *Engine Mfrs.*, 88 F.3d at 1080, with the benefits, for the Nation, of an alternative regulatory program. Petitioners identify no regime that would impose lower "federalism costs." *Shelby Cnty.*, 570 U.S. at 549 (cleaned up). Rather, they seek to impose an *exclusive* federal program, which would simultaneously eliminate the benefits provided by a limited-market testing ground and reduce state authority and accountability. *See* Litman Amicus Br. 29-31.

Congress's decision to authorize EPA to waive preemption for California was also sufficiently related to the targeted problem: California has long faced particularly severe air pollution challenges and had already designed a program to address those challenges. EPA Br. 40-41; *MEMA I*, 627 F.2d at 1108-09. No one disputes that those were the "'current conditions' … before Congress when it enacted the statute." *Gross v.*

United States, 771 F.3d 10, 15 (D.C. Cir. 2014) (quoting *Shelby Cnty.*, 570 U.S. at 553).

Finally, State Petitioners attempt an "as applied" challenge to the Restoration Decision—and the particular California standards it enables—based on claims about present conditions in California. Ohio Br. 31-33. But the relevant conditions for an equal sovereignty challenge are those when *Congress* acted. *Gross*, 771 F.3d at 15. Moreover, where the equal sovereignty principle applies, it constrains Congress's selection of certain States for differential treatment, not the State's exercise of federally sanctioned authority. *Shelby Cnty.*, 570 U.S. at 554 (focusing on "how [Congress] selects the jurisdictions subjected to preclearance"). In any event, EPA correctly found that California needs its program, and these particular standards, to address compelling and extraordinary conditions in California, EPA Br. 42, 84-91; *infra* Argument IV.A, confirming that the Restoration Decision is sufficiently related to the problem Congress targeted.

III. EPA CORRECTLY REVERSED THE WITHDRAWAL DECISION AS AN IMPROPER EXERCISE OF EPA'S AUTHORITY

Turning to the bases for the Restoration Decision, EPA correctly concluded that: (1) the Withdrawal Decision exceeded the agency's limited

authority to revoke a previously granted waiver; (2) even if the Withdrawal Decision were authorized, it was untimely; and (3) EPA had failed to properly consider reliance interests in the 2013 waiver. 87 Fed. Reg. 14,332, 14,344 (Mar. 14, 2022). Each of these threshold conclusions is an independent ground for denying these petitions. When, how, and on what bases EPA may withdraw a waiver are distinct questions from the merits of any bases EPA might select. *See* Fuels Br. 56-58.

By its terms, Section 209(b) only empowers EPA to grant or deny waivers requested by California. 42 U.S.C. § 7543(b)(1). This provision does not implicitly authorize EPA's withdrawal of a six-year-old waiver—and the disruption of multiple States' long-range pollution-control plans—simply because EPA chose to reject "the wisdom of its [previous] policy." *See* 84 Fed. Reg. 51,310, 51,333 (Sept. 27, 2019) (cleaned up). EPA and Industry Respondent-Intervenors explain the Withdrawal Decision's failure to properly consider reliance interests. EPA Br. 53-58; Indus. Resp. Br. 13-20. The Withdrawal Decision was also *ultra vires* and untimely.

A. The Withdrawal Decision's Bases Were Impermissible

EPA now expressly recognizes what precedent, the statute's text and structure, and agency practice already established: EPA "may only reconsider a previously granted waiver" where it discovers "a clerical or

factual error or mistake, or where … factual circumstances … have changed so significantly that the propriety of the waiver grant is called into doubt." 87 Fed. Reg. at 14,344. The Withdrawal Decision exceeded EPA's authority because it was not prompted by recognition of a factual error or any changes in factual circumstances. *Id.*; *see also* 84 Fed. Reg. at 51,350 (declining to finalize proposed factual finding). Rather, it "was premised on retroactive application of discretionary policy changes." 87 Fed. Reg. at 14,350.

As Congress was well aware when it enacted the waiver provision, agencies cannot reverse an adjudicatory grant of rights or privileges simply "to execute a subsequently adopted policy." *Am. Trucking Ass'n v. Frisco Transp. Co.*, 358 U.S. 133, 146 (1958); *see also Chapman v. El Paso Nat. Gas Co.*, 204 F.2d 46, 53-54 (D.C. Cir. 1953).[8] Petitioners try to work around this limitation by contending that the Withdrawal Decision executed no change in policy, but, rather, corrected "an erroneous statutory interpretation." Fuels Br. 59. That effort fails.

For the first time in fifty years of waiver proceedings, EPA chose to rely on a factor outside the three Section 209(b) criteria: the National

[8] Petitioners do not challenge EPA's longstanding position that its Section 209(b) waiver decisions are adjudications. 87 Fed. Reg. at 14,333; *see also, e.g.*, 58 Fed. Reg. 4166 (Jan. 13, 1993); Fuels Br. at 58, 60-61 (relying on adjudication cases).

Highway Traffic Safety Administration's (NHTSA's) preemption rule. 84 Fed. Reg. at 51,337-38. That involved no interpretation of Section 209(b), much less an error-correcting one. EPA also relied on a new policy determination that Section 209(b) forecloses state regulation of vehicular greenhouse gas emissions. *Id.* at 51,347.[9] While this new policy included a reinterpretation of Section 209(b)(1)(B), EPA itself described its traditional interpretation—the one it was choosing to reject—as *reasonable*. 84 Fed. Reg. at 51,341. As one of Petitioners' own cases indicates, this adoption of "one legally supportable position rather than another," "based only on policy reasons," is precisely the sort of policy shift that cannot support a withdrawal. *Belville Min. Co. v. United States*, 999 F.2d 989, 999 (6th Cir. 1993); *see also United States v. Seatrain Lines*, 329 U.S. 424, 429 (1947) (reinterpretation of legal term "commodities generally" constituted "new policy" that could not be retroactively applied); Admin. Law Profs. Amicus Br. 25-27. And, notably, none of Petitioners' other cases, Fuels Br. 59, supports the withdrawal of adjudicated privileges based on an agency's new

[9] Confirming the policy change underlying its withdrawal, EPA chose to reconsider only standards that reduce greenhouse gas emissions, *id.* at 51,329, and expressly disavowed application of its newly adopted interpretation to other standards, *id.* at 51,341 n.263.

legal position. *Gun South, Inc. v. Brady*, 877 F.2d 858, 866 (11th Cir. 1989) (reconsideration based on "sufficient evidence" undermining initial *factual finding*); *Ivy Sports Med., LLC v. Burwell*, 767 F.3d 81, 85 (D.C. Cir. 2014) (same).[10]

In any event, it is undisputed that the Withdrawal Decision was *not* based on changes in factual circumstances. It was, therefore, *ultra vires* because the statute's text and structure constrain withdrawals to factual grounds, as EPA correctly recognized here. 87 Fed. Reg. at 14,344. Under Section 209(b)(1), California makes the policy decisions about whether and how to regulate pollutants from new vehicles sold in the State, determines that its program is "at least as protective" as EPA's, and requests waivers. 42 U.S.C. § 7543(b)(1). EPA's role is "sharply restricted" to granting California's requests unless the record establishes "one of the *factual* circumstances set out in section 209(b)(1)(A)-(C)." *MEMA I*, 627 F.2d at 1121 (emphasis added). EPA reviews California's protectiveness determination under the "arbitrary and capricious" standard, 42 U.S.C.

[10] This does not mean EPA's interpretations are "carved in stone." Fuels Br. 59 (citing *rulemaking* cases) (cleaned up). To the extent the statute leaves anything open to interpretation, EPA can apply new interpretations *prospectively* to new waiver requests.

§ 7543(b)(1)(A), and assesses record-based issues like technological feasibility, *id.* § 7543(b)(1)(C).[11] Limiting EPA's role in this way was deliberate. After vigorous debate, Congress chose the mandatory "*shall* … waive," 42 U.S.C. § 7543(b)(1) (emphasis added), specifically to avoid placing California's program at the mercy of the federal government, *MEMA I*, 627 F.2d at 1120-21. Congress did not implicitly extend EPA's withdrawal authority beyond factual grounds, much less provide the "standardless and openended" withdrawal authority EPA claimed in 2019. *See Am. Methyl Corp. v. EPA*, 749 F.2d 826, 837 (D.C. Cir. 1984).

Moreover, Congress would not have explicitly invited California and other States to build their air pollution control programs around granted waivers, 42 U.S.C. § 7507, while simultaneously, and *implicitly*, permitting EPA to withdraw waivers absent significant evidence that it should do so. To the contrary, Congress expressly prohibits EPA, and all federal agencies, from engaging in, or supporting, "any activity which does not conform to" EPA-approved state implementation plans to achieve or maintain federal air quality standards, 42 U.S.C. § 7506—plans that frequently include state

[11] While the parties here dispute *which* facts EPA should find under one of the criterion (Section 209(b)(1)(B)), EPA's determination under that criterion is also a factual one.

emission standards for which a waiver has been granted, EPA Br. 55. Indeed, Congress is generally reluctant to empower agencies to upend previously authorized state programs unless warranted by *facts* on the ground. *E.g.*, 42 U.S.C. § 7410(k)(5) (EPA may require state plan revisions only when plan is "substantially inadequate"); 30 U.S.C. § 1271(b) (agency may supplant previously authorized state mining regulations only when the State fails to adequately enforce its program); Admin. Law Profs. Amicus Br. 14-15.[12] Nothing in Section 209(b) suggests Congress granted EPA greater power here.

To the contrary, firm limits on EPA's withdrawal authority are necessary to one of the "benefits" Congress intended to obtain from the waiver provision—the development of "new control systems" for vehicular emissions. *MEMA I*, 627 F.2d at 1110; *see also* Indus. Respond. Br. 18-20. If EPA did possess "unguided and open-ended power to revoke waivers," manufacturers might delay investing in new technologies to see if a waiver would be withdrawn—or even seek such a withdrawal themselves. *Am. Methyl Corp.*, 749 F.2d at 839-40.

[12] Congress even considered it necessary to *expressly* authorize EPA to correct mistakes in its approvals of state implementation plans. 42 U.S.C. § 7410(k)(6).

Finally, contrary to Petitioners' claims, Fuels Br. 61, EPA's prior practice is entirely consistent with the position it took here. In the only prior proceeding where EPA considered withdrawing a waiver, it did so because of new information related to its *factual findings*. 47 Fed. Reg. 7306 (Feb. 18, 1982). Neither of Petitioners' examples demonstrates otherwise, Fuels Br. 61, because neither involved the withdrawal of a previously granted waiver, 74 Fed. Reg. 32,744, 32,757 (July 8, 2009) (reconsidering decision *not* to grant a waiver); 43 Fed. Reg. 998, 999 (Jan. 5, 1978) (considering whether amendments to California's standards required *new* waiver).

B. EPA's Withdrawal of a Six-Year-Old Waiver Was Untimely

Even if the Withdrawal Decision's bases were somehow permissible, any "inherent power to reconsider and change" privileges afforded through adjudications must be exercised "within a reasonable period of time." *Mazaleski v. Treusdell*, 562 F.2d 701, 720 (D.C. Cir. 1977), with reasonableness generally "measured in weeks, not years," *id.* Readjudicating the 2013 waiver *six years* later was not reasonable. *Ivy Sports*, 767 F.3d at 86 (collecting cases on timeliness).

Petitioners contend that "timing is no barrier to reconsideration" here because Section 209(b) waivers are granted to a State, rather than a private

party, Fuels Br. 60, and because "the Section 209(b) waiver process is effectively an ongoing proceeding," *id.* at 61.[13] But States have "legitimate interest[s] in the continued enforceability" of their own laws, *Maine v. Taylor*, 477 U.S. 131, 137 (1986), and Petitioners cannot explain why those interests warrant *less* protection than those of private parties. Moreover, there was nothing "ongoing" about the 2013 waiver proceeding in 2019. The waiver was final agency action when granted and became unreviewable when no one challenged it within sixty days. 42 U.S.C. § 7607(b). EPA's Withdrawal Decision exceeded any measure of reasonable timeliness.

IV. EPA CORRECTLY REJECTED BOTH BASES FOR ITS WITHDRAWAL DECISION

In its Restoration Decision, EPA correctly rejected the two bases for its Withdrawal Decision: (1) EPA's conclusion that California no longer "need[s] such State standards" under Section 209(b)(1)(B), 42 U.S.C. § 7543(b)(1)(B); and (2) its reliance on NHTSA's EPCA preemption rule. 87 Fed. Reg. at 14,352, 14,374.

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[13] Petitioners also attempt to conflate reversing a *denial* with withdrawing a *grant*. Fuels Br. 55, 61. But the former results in a waiver—an action *expressly* authorized by Congress—whereas the latter is neither a waiver nor a denial of a request. 42 U.S.C. § 7543(b)(1). The consequences of these actions are also substantially different, given that Congress invited States to build long-term pollution control programs on top of waiver grants, not denials. *Id.* § 7507; *see also* Admin. Law Profs. Amicus Br. 15-17, 22.

A. EPA Correctly Rejected the Withdrawal Decision's Section 209(b)(1)(B) Determination

Section 209(b)(1)(B) permits EPA to deny California a waiver if the State does not "need such State standards to meet compelling and extraordinary conditions." 42 U.S.C. § 7543(b)(1)(B). EPA's Withdrawal Decision rejected EPA's traditional interpretation of this criterion and disregarded the significant record evidence underlying its 2013 findings. Correcting course, here EPA carefully reviewed the record and reaffirmed the three determinations it made in 2013—one applying its longstanding interpretation and two others applying the novel interpretation Petitioners prefer. Those three determinations are well founded, and each is independently sufficient to affirm the Restoration Decision (along with EPA's proper rejection of its EPCA preemption rationale, *see infra* Argument IV.B).

1. EPA Correctly Concluded that California Needs Its Separate Program

a. EPA's Traditional Whole-Program Approach Is the Best Reading of the Text

In the Restoration Decision, EPA concluded that California continues to have the kind of extraordinary and compelling conditions that led Congress to conclude the State needs its own vehicular emissions control

program. 87 Fed. Reg. at 14,358-14,362. Fuels Petitioners do not dispute that California has such conditions (or that it has some of the worst air quality in the nation); instead, they contend that it is improper to examine California's need at the program level.

Petitioners' contention conflicts with EPA's longstanding interpretation that "such State standards" refers to California's standards "in the aggregate"—*i.e.*, to California's whole program. *See* 42 U.S.C. § 7543(b)(1). This traditional interpretation best comports with the statute's text, its underlying intent, and judicial precedent. EPA Br. 58-68. There is simply "[n]o antecedent . . . in the text for the phrase '*such* State standards' in Section 209(b)(1)(B) except the *aggregate* State standards discussed in Section 209(b)(1)." EPA Br. 60. Nor is this textual link an accident; Congress enacted the two phrases simultaneously. Pub. L. No. 95-95, title II, §§ 207, 221, 91 Stat. 755, 762 (1977).

Petitioners posit that "such State standards" instead means "the particular standards for which [California] seeks a waiver." Fuels Br. 45-46. But they disregard that the waiver is granted "to [the] State," not to individual standards, 42 U.S.C. § 7543(b)(1), and they give no plausible meaning to the word "such," EPA Br. 64. Moreover, Petitioners "offer no account of what function" would be served, *Advoc. Health Care Network v.*

Stapleton, 137 S. Ct. 1652, 1659 (2017), by California's determination that its program is adequately protective "in the aggregate," 42 U.S.C. § 7543(b)(1), if, as Petitioners contend, the very next criterion permits EPA to reject any individual standard it deems "ineffectual," Fuels Br. 46.

EPA's approach, in contrast, gives all three criteria in Section 209(b)(1) distinct functions: Section 209(b)(1)(A) safeguards public health and welfare by requiring a minimum level of protection; Section 209(b)(1)(B) allows for the withholding of additional waivers if California's conditions no longer warrant extending a separate state program; and Section 209(b)(1)(C) protects manufacturers against an infeasible program. Far from rendering Section 209(b)(1)(B) meaningless, Fuels Br. 46, EPA's traditional interpretation ensures that the specific burden about which manufacturers complained to Congress—the requirement to design both "federal cars" and "California cars," *Engine Mfrs. Ass'n*, 88 F.3d at 1080—lasts only so long as needed. *See* S. Rep. No. 90-403, at 33 (1967). Thus, Section 209(b)(1)(B) addresses the number of different *programs* manufacturers may be subject to—not the number of standards in a given program. *See also* 42 U.S.C. § 7507 (prohibiting "third vehicle"). Section 209(b)(1)(C)'s feasibility inquiry then ensures that the number and nature of standards in California's

program are, collectively, achievable and not unduly "disruptive." *See* Fuels Br. 46.

Finally, Congress has resolved any doubt about the whole-program interpretation by ratifying it twice, H.R. Rep. No. 95-294, at 301 (1977), 42 U.S.C. § 7543(e)(2)(A), while well aware that EPA had consistently rejected the single-standard approach. *See* 41 Fed. Reg. 44,209, 44,210, 44,213 (Oct. 7, 1976) (rejecting single-standard interpretation prior to 1977 amendments); 49 Fed. Reg. 18,887, 18,889-90 (May 3, 1984) (same, prior to Section 209(e)(2)(A)(ii)'s 1990 enactment).

b. Petitioners' Manufactured Pollutant-Specific Prohibition Cannot Undermine EPA's Whole-Program Interpretation

Petitioners contend that EPA's whole-program approach must be wrong because it would override a purported prohibition against individual standards that reduce greenhouse gases. Fuels Br. 27-34; *see also id.* at 45. There is no such categorical bar.

The interplay of Section 209(b) with Section 202(a)—under which EPA regulates vehicular greenhouse gas emissions—demonstrates there is no pollutant-specific bar. Section 209(a) preempts States from promulgating standards that EPA may prescribe under Section 202(a), 42 U.S.C. § 7521(a), and Section 209(b) empowers EPA to waive Section 209(a)'s

preemption for California. *MEMA I*, 627 F.2d at 1107; *see also* 49 U.S.C. § 7543(b)(1). Section 209(b) is not, therefore, *categorically* narrower than Section 202(a). This was intentional: Congress intended EPA to continue "draw[ing] heavily on the California experience to fashion and to improve the national efforts at emissions control." *MEMA I*, 627 F.2d at 1110.

In contrast with other parts of the Act where state programs are evaluated against federal standards, *e.g.*, 42 U.S.C. §§ 7410, 7411(d), here Congress explicitly left it to California to determine not only which pollutants to regulate but how stringently to do so, *id.* § 7543(b)(1) (*California* determines protectiveness). *See also MEMA I*, 627 F.2d at 1112 (Congress permitted California to evaluate "the relative risks of various pollutants"); 43 Fed. Reg. 25,729, 25,735 (June 14, 1978) (describing EPA's "practice to leave the decisions on controversial matters of public policy, such as *whether to regulate methane emissions*, to California") (emphasis added). Accordingly, from the beginning, EPA has declined to "second-guess the wisdom of state policy," *e.g.*, 40 Fed. Reg. 23,102, 23,103 (May 28, 1975), and Congress has endorsed that view, even "*expand[ing]* California's flexibility to adopt a complete program of motor vehicle emissions control," *MEMA I*, 627 F.2d at 1110 (emphasis added).

Congress has also repeatedly embraced the California standards at issue here: in 1990 it instructed EPA to incorporate elements of California's zero-emission-vehicle standards into federal regulations; in 2007, it directed EPA to look to California's greenhouse gas standards when setting federal procurement requirements; and just last year, it provided for EPA to support States in adopting and implementing greenhouse gas and zero-emission-vehicle standards. EPA Br. 74, 76.

The words "extraordinary," "need," and "meet" cannot supply Petitioners' categorical bar, much less overcome Congress's repeated embrace of these standards. EPA Br. 68-76. The plain meaning of the term "extraordinary" does not require that California is *sui generis*, and Congress's invitation to other States to adopt California's standards would make no sense if it did. *See* EPA Br. 70. Nor does "extraordinary" require a showing of unusualness "*as compared to other States*." Fuels Br. 29. Congress understands that conditions can be unusual in myriad ways, and when it intends to limit such terms as Petitioners suggest, it does so expressly. 42 U.S.C. § 6297(d)(1)(C) (defining "unusual and compelling State … interests" in part as those "substantially different" than "those prevailing in the United States generally"). Inserting such a meaning in Section 209(b), where Congress did not, would artificially constrain the

range of benefits California's successful experiments could provide to the Nation.

Congress likewise understands, "[i]t is perfectly ordinary English to say some effort is 'needed' to 'meet' a problem if that effort contributes to the solution." EPA Br. 73. The Act requires EPA to regulate vehicular emissions that "cause, *or contribute to*, [harmful] air pollution." 42 U.S.C. § 7521(a)(1). Congress did not hide a higher bar for California's program—one that requires California greenhouse-gas-reducing standards to lower global temperatures—in the words "need" and "meet." Fuels Br. 51-52. Nor did Congress intend those words to preclude incremental progress on air pollution problems that it knows can be intractable and require multi-faceted efforts. *E.g.*, *id.* § 7410(a)(2)(A) (anticipating long-term state plans containing myriad "enforceable emission limitations and other control measures, means, or techniques").

Petitioners' resort to the federalism canon and major questions doctrine cannot save their meritless statutory argument. Fuels Br. 19-27; *see also* EPA Br. 77-83. Far from limiting which pollutants or technologies States can regulate in their own markets, the federalism canon *protects States* from certain forms of "Congressional interference," *Gregory*, 501 U.S. at 460; and the major questions doctrine protects one branch of the *federal*

government from overreach by another, *West Virginia v. EPA*, 142 S. Ct. 2587, 2609 (2022); *see also id.* at 2618 (Gorsuch, J., concurring) (lauding the benefits of "States … serv[ing] as laboratories.") (cleaned up). It is Petitioners, not EPA, who seek a judicially mandated expansion of Executive Branch authority—at the expense of the States. Fuels Br. 26. EPA properly *constrained* its authority here. 87 Fed. Reg. at 14,334. And there is nothing "unprecedented," *West Virginia*, 142 S. Ct. at 2612, about States regulating the emissions of products sold within their borders. *E.g.*, *Energy & Env't Legal Inst. v. Epel*, 793 F.3d 1169 (10th Cir. 2015); *see also* Indus. Respond. Br. 7-8.[14] Moreover, there is no ambiguity about Congress's intent "to afford California the broadest possible discretion in selecting the best means to protect the health of its citizens and the public welfare," *MEMA I*, 627 F.2d at 1110 (cleaned up), or its repeated embrace of these California standards, *supra* 39.

[14] Petitioners' preemption theories, Fuels Br. 25-26, are not properly presented here, *infra* Argument V.A, and, regardless, raise no "major question." Moreover, California's standards are no obstacle to the Renewable Fuels Standard—an issue never raised before EPA. That program's volume mandates adjust with the "percentage[s] of transportation fuel sold . . . in the United States." 42 U.S.C. § 7545(o)(3)(B)(ii).

2. EPA Correctly Found that California Needs These Standards to Address Its Criteria Pollution Conditions

EPA correctly found that even applying Petitioners' atextual single-standard approach, California needs these standards to address its criteria pollution conditions. 87 Fed. Reg. at 14,362-65; EPA Br. 87-91. No one disputes that California's criteria pollution conditions remain "compelling and extraordinary," despite decades of effort and substantial improvement. *See, e.g.*, Am. Thoracic Society Amicus Br. 11-17; South Coast Amicus Br. 10-12. Instead, Petitioners mistakenly question the criteria pollution benefits of these standards.

California's zero-emission-vehicle standards extend and strengthen a program that began two decades ago as *a criteria pollution reduction program*. 78 Fed. Reg. 2112, 2118 (Jan. 9, 2013). California made the program's continued importance to air quality clear in the 2013 waiver proceeding,[15] and EPA agreed, *id.* at 2113-2114, 2131, finding California had "reasonably refute[d]" arguments that these zero-emission-vehicle standards do not reduce criteria pollutant emissions, *id.* at 2125. EPA has

[15] *E.g.*, JA___, ___[R-8197_p15-16]; JA___-___[R-8248_p3-4] ("ZEVs are an investment in the future. … [W]e need these technologies to be commercialized by 2025 to reach smog forming and [greenhouse gas] emission reduction targets long term.")

also approved incorporation of these standards into California's State Implementation Plan (and other States' plans), designed to achieve or maintain federal air quality standards for criteria pollutants. *E.g.*, 84 Fed. Reg. at 51,337; 81 Fed. Reg. 39,424, 39,425 (June 16, 2016). And the record now contains even more evidence of these benefits—none of which Petitioners acknowledge, let alone refute. JA___-___[R-133_AppendixA_2-5], ___-___[R-133_AppendixB_11-15].

California's greenhouse gas standards likewise produce important criteria emission reductions, JA___, ___[R-1_288,308]; JA___[R-5960_24]; JA___-___[R-133_AppendixC_2-3], as EPA has recognized both here and in state plan approvals, *see, e.g.*, 87 Fed. Reg. at 14,363-14,365; 82 Fed. Reg. 42,233 (Sept. 7, 2017) (Maine); 80 Fed. Reg. 61,752 (Oct. 14, 2015) (Delaware); *see also* 77 Fed. Reg. 62,624, 62,899 (Oct. 15, 2012) (describing criteria benefits of analogous federal standards).

3. EPA Also Correctly Found that California Needs These Standards to Address Its Climate Change Conditions

EPA properly found that California additionally needs these standards to address its compelling and extraordinary climate conditions. California is on the front line of climate change: "[w]ith its extensive coastline, fire-prone ecosystems, mountainous topography, and water-intensive agriculture,

California is already suffering exceptional and singular impacts from a warmer climate." Climate Scientists Amicus Br. 5. Over the last decade, California has suffered natural events more severe than any in its history: an extreme and persistent drought, increasingly large and devastating wildfires, the loss of snowpack on which the state's water systems depend, and the warmest temperatures on record. JA___[R-133_AppendixF_CAClimateChangeAssessment__3]; *accord* JA___[R-8103_7] (predicting effects). California is projected to see a 77 percent increase in land destroyed by wildfires, placing millions of people at risk, and threatening air quality for millions more. JA___[R-8103_9]; Climate Scientists Amicus Br. 8-10. California's water supply is extraordinarily vulnerable to climate change, with sweeping impacts on aquatic ecosystems, hydropower, basic human needs, and the nation's largest agricultural economy. JA___-___[R-8103_12-16]; Climate Scientists Amicus Br. 14-18. California also faces an increase in severe floods, JA___[R-8103_7], and acute economic disruption from rising seas and ocean acidification, JA___[R-8103_12]. The State will see exacerbation of its smog conditions, already the worst in the Nation, JA___-___[R-8103_8-9], and a corresponding decline in human health. The severity of each individual

impact, and their aggregate effects, constitute "extraordinary and compelling conditions" under any reasonable definition of that phrase.

California's zero-emission-vehicle and greenhouse gas standards result in significant reductions in greenhouse gas emissions. *See* JA___[R-1__370]; JA___, ___-___[R-8197 _10,16-17]; JA___[R-133_AppendixC_5-6,9-11]. These reductions are critical to mitigating climate impacts and to avoiding climate "tipping points." The technologies the standards demand will also facilitate greater emission reductions in the future. JA___, ___-___ [R-8197_2,4–5]; JA___[R-1_373].

B. EPA Correctly Reversed the Withdrawal Decision's Reliance on NHTSA's Preemption Rule

The Restoration Decision's reversal of the Withdrawal Decision's other basis—EPA's reliance on NHTSA's (now-repealed) EPCA preemption rule—is equally justified.[16] For 50 years, EPA has consistently limited the scope of its waiver reviews to Section 209(b)'s three statutory criteria—none of which involves EPCA preemption. EPA Br. 91-94. This Court has repeatedly upheld EPA's position. *MEMA I*, 627 F.2d at 1111; *Motor & Equip. Mfrs. Ass'n v. Nichols*, 142 F.3d 449, 462-63 (D.C. Cir. 1998). EPA

[16] On its own, this reversal required restoration of the waiver for model years 2017-2020. *See* 84 Fed. Reg. at 51,328.

correctly returned to this longstanding position here. 87 Fed. Reg. at 14,373-74; *see* EPA Br. 94-97.

"Agencies have only those powers given to them by Congress," *W. Virginia*, 142 S. Ct. at 2609, and have "no special authority to pronounce on pre-emption absent delegation by Congress," *Wyeth v. Levine*, 555 U.S. 555, 577 (2009). Congress did not give EPA the authority to base its Clean Air Act waiver decisions on an interpretation of another statute's preemption regime, and EPA did not "contravene the law" by declining to do so. Ohio Br. 39.

V. PETITIONERS' EPCA PREEMPTION CLAIMS ARE MISPLACED

In reviewing EPA's action, this Court should also decline to take up Petitioners' meritless EPCA preemption claim.

A. This Court Should Not Address EPCA Preemption

Because EPA did not pass upon the merits of Petitioners' EPCA preemption arguments in its Restoration Decision, 87 Fed. Reg. at 14,335, 14,368, this Court should not do so either. "[J]udicial review of agency action is limited to the grounds that the agency invoked when it took the action." *DHS v. Regents of the Univ. of Cal.*, 140 S. Ct. 1891, 1907 (2020) (quotation omitted); *see also Pension Benefit Guaranty Corp. v. LTV Corp.*, 496 U.S. 633, 646 (1990) (Courts should not disturb agency action based on

"public policies that derive from federal statutes other than the agency's enabling Act."). The "modest scope" of this Court's review of EPA waiver decisions concerns only "whether a federal officer properly discharged his responsibilities under a federal statute," *MEMA I*, 627 F.2d at 1105, i.e., whether EPA's decision complied with the Clean Air Act.

Petitioners remain free to press their EPCA preemption claims against California's standards in an appropriate state or federal district court. EPA Br. 97; *see also Green Mountain Chrysler Plymouth Dodge Jeep v. Crombie*, 508 F. Supp. 2d 295, 302 (D. Vt. 2007) (rejecting EPCA preemption claims after sixteen-day trial); *Cent. Valley Chrysler-Jeep, Inc. v. Goldstene*, 529 F. Supp. 2d 1151, 1189 (E.D. Cal. 2007) (same, after resolving evidentiary disputes). But this Court, in evaluating a "petition for review of final action of the Administrator" under the Clean Air Act, 42 U.S.C. § 7607(b), cannot declare the laws of 18 States preempted under a different statute.

B. EPCA Does Not Preempt California's Standards

If the Court nonetheless addresses Petitioners' improperly presented EPCA preemption claims, it should reject them. EPCA's preemption provision, 49 U.S.C. § 32919(a), does not preempt any emission standards

for which California has a waiver, far less these emission standards, which Congress has repeatedly embraced.

1. When Congress enacted EPCA in 1975, it did not impliedly repeal or otherwise disturb the Clean Air Act's 1967 waiver provision. Instead, Congress designed EPCA's fuel-economy program to accommodate all emission standards authorized by the Clean Air Act—including California standards for which EPA waives preemption—an accommodation that would make no sense if those standards were preempted as "related to fuel economy standards," 49 U.S.C. § 32919(a). *Green Mountain*, 508 F. Supp. 2d at 345-46.

For the first three years, Congress itself set fuel-economy standards for passenger cars, 15 U.S.C. § 2002(a)(1) (1976), at levels reflecting the anticipated fuel-economy effects of emission standards and other motor vehicle laws, H.R. Rep. No. 94-340, at 86-90 (1975). Congress also directed NHTSA to grant variances to manufacturers for whom these other "Federal standards"—which expressly included all emission standards for which California had a Clean Air Act waiver—impeded compliance with EPCA's fuel-economy standards. 15 U.S.C. § 2002(d)(3)(C)(i), (D)(i) (1976). For later years, Congress directed NHTSA to set the fuel-economy standards and

to account for the effects of "federal motor vehicle standards" on fuel economy when doing so. 15 U.S.C. § 2002(a)(3), (a)(4), (e) (1976).[17]

Petitioners suggest this change in process—from after-the-fact variances accommodating "federal standards" to front-end standard-setting accommodating "federal motor vehicle standards"—reflects a hidden desire to stop accommodating California emission standards, and instead subject them to preemption, Ohio Br. 40. That is nonsensical, Carper-Pallone Amicus Br. 9-11, and belied by the absence of "any positive indication that Congress" intended to preempt the very laws it "previously sought to foster" under the Clean Air Act and initially accommodated in EPCA. *Cal. Div. of Labor Stds. Enforc. v. Dillingham Constr., N. A.,* 519 U.S. 316, 331 n.7 (1997). Accordingly, NHTSA for decades consistently read EPCA as continuing to accommodate all Clean Air Act emissions standards, including California's. *Green Mountain*, 508 F. Supp. 2d at 347 n.54 (compiling rules).

2. Even if they were not categorically accommodated, California's greenhouse gas and zero-emission-vehicle standards would still not be

[17] A 1994 non-substantive recodification replaced "Federal motor vehicle standards" with the current phrase "motor vehicle standards of the Government." *Green Mountain*, 508 F. Supp. 2d at 306-07.

"related to fuel economy standards." *See* 49 U.S.C. § 32919(a). California's standards target emissions. They are not fuel-economy standards on their face or in disguise. And they do not rely on, conflict with, or require any particular strategy for compliance with, fuel-economy standards.

Petitioners assert, incorrectly, that California's standards require improvements to the fuel economy of gas-powered vehicles. Ohio Br. 36. But manufacturers have significantly reduced emissions by other means, including improvements to air-conditioning systems. *Green Mountain*, 508 F. Supp. 2d at 381. Moreover, Petitioners ignore that manufacturers are selling increasing numbers of electric and hydrogen vehicles to comply with California's standards, JA____ [R-133_AppendixE_8-9]), and these vehicles do not even use "fuel," let alone have "fuel economy," under EPCA. 49 U.S.C. § 32901(a)(10), (a)(11).

These "alternative fueled vehicle[s]" do have calculated "fuel economy values," enabling manufacturers to count them toward compliance with federal fuel-economy standards. *Id*. §§ 32901(a)(2), 32904(a)(2)(B), 32905(a). But, in part because the standards at issue here all apply on a *fleetwide* basis, California's standards do not "bind" manufacturers "to any particular choice" of strategy to comply with federal fuel-economy standards. *Rutledge v. Pharm. Care Mgmt. Ass'n*, 141 S. Ct. 474, 480

(2020) (cleaned up). The fact that a manufacturer's decisions about how to comply with California's standards might also facilitate its compliance with federal fuel-economy standards does not establish that the *standards* are "related to" each other.[18] *See id.; see also Engine Mfrs. Ass'n. v. South Coast Air Qual. Mgmt. Dist.*, 541 U.S. 246, 253-54 (2004) (distinguishing standards from means of ensuring compliance). "'[R]elated to' does not mean the sky is the limit." *Dan's City Used Cars v. Pelkey*, 569 U.S. 251, 260 (2013). Indeed, far from expressing intent to preempt California's standards, Congress praised those standards when it decided to allow zero-emission vehicles to count toward compliance with the fuel-economy standards, H.R. Rep. 102-474, pt. 1, at 137; pt. 2, at 87, 90-91 (1992). *See Dillingham*, 519 U.S. at 331, n.7.

3. Finally, Petitioners' preemption claims cannot plausibly be reconciled with Congress's repeated embrace of state greenhouse gas and zero-emission-vehicle standards. EPA Br. 74-76. It would be pointless—even nonsensical—for Congress to have directed EPA to rely on these California standards and to support their adoption and implementation—if

[18] Underscoring the point, when NHTSA sets standards, it must determine what "maximum feasible" improvements in fuel economy to require without regard to electric or hydrogen vehicles. 49 U.S.C. § 32902(h)(1).

these standards were preempted. Indeed, Congress was well aware of the argument that EPCA preempts these standards and embraced California's standards nonetheless. Carper-Pallone Amicus Br. 18-22; Dotson & Maghamfar, *The Clean Air Act Amendments of 2022*, 53 ENV. L. REPT'R 10017, 10030-32 (2023).

CONCLUSION

These petitions for review should be dismissed for lack of standing. If the Court reaches the merits, the petitions should be denied.

Dated: February 13, 2023 Respectfully submitted,

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CERTIFICATE OF COMPLIANCE

I hereby certify that the foregoing brief complies with the type-volume limitations of the applicable rules and this Court's briefing format order dated September 22, 2022 (ECF No. 1965631). According to Microsoft Word, the portions of this document not excluded by Federal Rule of Appellate Procedure 32(f) and Circuit Rule 32(e)(1) contain 10,249 words. Combined with the word count of the other Respondent-Intervenors briefs, this does not exceed the 14,700 words the Court allocated to all Respondent-Intervenors.

I further certify that this brief complies with the typeface requirements of Federal Rules of Appellate Procedure 32(a)(5) and 32(a)(6) because it has been prepared using a proportionally spaced typeface (Times New Roman) in 14-point font.

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CERTIFICATE OF SERVICE

I hereby certify that on February 13, 2023 I electronically filed the foregoing brief with the Clerk of the Court for the United States Court of Appeals for the District of Columbia Circuit using the Court's CM/ECF system.

I further certify that all parties are participating in the Court's CM/ECF system and will be served electronically by that system.

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ORAL ARGUMENT NOT YET SCHEDULED

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, et al.,

Respondents.

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empowered to administer oaths, subpena witnesses, or written or printed materials, compel the attendance of witnesses, or production of the materials, and take evidence including but not limited to inspections of the land affected and other surface coal mining operations carried on by the applicant in the general vicinity. A verbatim record of each public hearing required by this chapter shall be made, and a transcript made available on the motion of any party or by order of the regulatory authority.

(Pub. L. 95–87, title V, § 519, Aug. 3, 1977, 91 Stat. 501.)

§ 1270. Citizens suits

(a) Civil action to compel compliance with this chapter

Except as provided in subsection (b) of this section, any person having an interest which is or may be adversely affected may commence a civil action on his own behalf to compel compliance with this chapter—

(1) against the United States or any other governmental instrumentality or agency to the extent permitted by the eleventh amendment to the Constitution which is alleged to be in violation of the provisions of this chapter or of any rule, regulation, order or permit issued pursuant thereto, or against any other person who is alleged to be in violation of any rule, regulation, order or permit issued pursuant to this subchapter; or

(2) against the Secretary or the appropriate State regulatory authority to the extent permitted by the eleventh amendment to the Constitution where there is alleged a failure of the Secretary or the appropriate State regulatory authority to perform any act or duty under this chapter which is not discretionary with the Secretary or with the appropriate State regulatory authority.

The district courts shall have jurisdiction, without regard to the amount in controversy or the citizenship of the parties.

(b) Limitation on bringing of action

No action may be commenced—

(1) under subsection (a)(1) of this section—

(A) prior to sixty days after the plaintiff has given notice in writing of the violation (i) to the Secretary, (ii) to the State in which the violation occurs, and (iii) to any alleged violator; or

(B) if the Secretary or the State has commenced and is diligently prosecuting a civil action in a court of the United States or a State to require compliance with the provisions of this chapter, or any rule, regulation, order, or permit issued pursuant to this chapter, but in any such action in a court of the United States any person may intervene as a matter of right; or

(2) under subsection (a)(2) of this section prior to sixty days after the plaintiff has given notice in writing of such action to the Secretary, in such manner as the Secretary shall by regulation prescribe, or to the appropriate State regulatory authority, except that such action may be brought immediately after such notification in the case where the violation or order complained of constitutes an imminent threat to the health or safety of the plaintiff or would immediately affect a legal interest of the plaintiff.

(c) Venue; intervention

(1) Any action respecting a violation of this chapter or the regulations thereunder may be brought only in the judicial district in which the surface coal mining operation complained of is located.

(2) In such action under this section, the Secretary, or the State regulatory authority, if not a party, may intervene as a matter of right.

(d) Costs; filing of bonds

The court, in issuing any final order in any action brought pursuant to subsection (a) of this section, may award costs of litigation (including attorney and expert witness fees) to any party, whenever the court determines such award is appropriate. The court may, if a temporary restraining order or preliminary injunction is sought require the filing of a bond or equivalent security in accordance with the Federal Rules of Civil Procedure.

(e) Effect on other enforcement methods

Nothing in this section shall restrict any right which any person (or class of persons) may have under any statute or common law to seek enforcement of any of the provisions of this chapter and the regulations thereunder, or to seek any other relief (including relief against the Secretary or the appropriate State regulatory authority).

(f) Action for damages

Any person who is injured in his person or property through the violation by any operator of any rule, regulation, order, or permit issued pursuant to this chapter may bring an action for damages (including reasonable attorney and expert witness fees) only in the judicial district in which the surface coal mining operation complained of is located. Nothing in this subsection shall affect the rights established by or limits imposed under State Workmen's Compensation laws.

(Pub. L. 95–87, title V, § 520, Aug. 3, 1977, 91 Stat. 503.)

Editorial Notes

REFERENCES IN TEXT

The Federal Rules of Civil Procedure, referred to in subsec. (d), are set out in the Appendix to Title 28, Judiciary and Judicial Procedure.

§ 1271. Enforcement

(a) Notice of violation; Federal inspection; waiver of notification period; cessation order; affirmative obligation on operator; suspension or revocation of permits; contents of notices and orders

(1) Whenever, on the basis of any information available to him, including receipt of information from any person, the Secretary has reason to believe that any person is in violation of any requirement of this chapter or any permit condition required by this chapter, the Secretary

shall notify the State regulatory authority, if one exists, in the State in which such violation exists. If no such State authority exists or the State regulatory authority fails within ten days after notification to take appropriate action to cause said violation to be corrected or to show good cause for such failure and transmit notification of its action to the Secretary, the Secretary shall immediately order Federal inspection of the surface coal mining operation at which the alleged violation is occurring unless the information available to the Secretary is a result of a previous Federal inspection of such surface coal mining operation. The ten-day notification period shall be waived when the person informing the Secretary provides adequate proof that an imminent danger of significant environmental harm exists and that the State has failed to take appropriate action. When the Federal inspection results from information provided to the Secretary by any person, the Secretary shall notify such person when the Federal inspection is proposed to be carried out and such person shall be allowed to accompany the inspector during the inspection.

(2) When, on the basis of any Federal inspection, the Secretary or his authorized representative determines that any condition or practices exist, or that any permittee is in violation of any requirement of this chapter or any permit condition required by this chapter, which condition, practice, or violation also creates an imminent danger to the health or safety of the public, or is causing, or can reasonably be expected to cause significant, imminent environmental harm to land, air, or water resources, the Secretary or his authorized representative shall immediately order a cessation of surface coal mining and reclamation operations or the portion thereof relevant to the condition, practice, or violation. Such cessation order shall remain in effect until the Secretary or his authorized representative determines that the condition, practice, or violation has been abated, or until modified, vacated, or terminated by the Secretary or his authorized representative pursuant to paragraph (5) of this subsection. Where the Secretary finds that the ordered cessation of surface coal mining and reclamation operations, or any portion thereof, will not completely abate the imminent danger to health or safety of the public or the significant imminent environmental harm to land, air, or water resources, the Secretary shall, in addition to the cessation order, impose affirmative obligations on the operator requiring him to take whatever steps the Secretary deems necessary to abate the imminent danger or the significant environmental harm.

(3) When, on the basis of a Federal inspection which is carried out during the enforcement of a Federal program or a Federal lands program, Federal inspection pursuant to section 1252, or section 1254(b) of this title, or during Federal enforcement of a State program in accordance with subsection (b) of this section, the Secretary or his authorized representative determines that any permittee is in violation of any requirement of this chapter or any permit condition required by this chapter; but such violation does not create an imminent danger to the health or safety of the public, or cannot be reasonably expected to cause significant, imminent environmental harm to land, air, or water resources, the Secretary or authorized representative shall issue a notice to the permittee or his agent fixing a reasonable time but not more than ninety days for the abatement of the violation and providing opportunity for public hearing.

If, upon expiration of the period of time as originally fixed or subsequently extended, for good cause shown and upon the written finding of the Secretary or his authorized representative, the Secretary or his authorized representative finds that the violation has not been abated, he shall immediately order a cessation of surface coal mining and reclamation operations or the portion thereof relevant to the violation. Such cessation order shall remain in effect until the Secretary or his authorized representative determines that the violation has been abated, or until modified, vacated, or terminated by the Secretary or his authorized representative pursuant to paragraph (5) of this subsection. In the order of cessation issued by the Secretary under this subsection, the Secretary shall determine the steps necessary to abate the violation in the most expeditious manner possible, and shall include the necessary measures in the order.

(4) When, on the basis of a Federal inspection which is carried out during the enforcement of a Federal program or a Federal lands program, Federal inspection pursuant to section 1252 or section 1254 of this title or during Federal enforcement of a State program in accordance with subsection (b) of this section, the Secretary or his authorized representative determines that a pattern of violations of any requirements of this chapter or any permit conditions required by this chapter exists or has existed, and if the Secretary or his authorized representative also find that such violations are caused by the unwarranted failure of the permittee to comply with any requirements of this chapter or any permit conditions, or that such violations are willfully caused by the permittee, the Secretary or his authorized representative shall forthwith issue an order to the permittee to show cause as to why the permit should not be suspended or revoked and shall provide opportunity for a public hearing. If a hearing is requested the Secretary shall inform all interested parties of the time and place of the hearing. Upon the permittee's failure to show cause as to why the permit should not be suspended or revoked, the Secretary or his authorized representative shall forthwith suspend or revoke the permit.

(5) Notices and orders issued pursuant to this section shall set forth with reasonable specificity the nature of the violation and the remedial action required, the period of time established for abatement, and a reasonable description of the portion of the surface coal mining and reclamation operation to which the notice or order applies. Each notice or order issued under this section shall be given promptly to the permittee or his agent by the Secretary or his authorized representative who issues such notice or order, and all such notices and orders shall be in writing and shall be signed by such authorized representatives. Any notice or order issued pursuant to this section may be modified,

vacated, or terminated by the Secretary or his authorized representative. A copy of any such order or notice shall be sent to the State regulatory authority in the State in which the violation occurs: *Provided*, That any notice or order issued pursuant to this section which requires cessation of mining by the operator shall expire within thirty days of actual notice to the operator unless a public hearing is held at the site or within such reasonable proximity to the site that any viewings of the site can be conducted during the course of public hearing.

(b) Inadequate State enforcement; notice and hearing

Whenever on the basis of information available to him, the Secretary has reason to believe that violations of all or any part of an approved State program result from a failure of the State to enforce such State program or any part thereof effectively, he shall after public notice and notice to the State, hold a hearing thereon in the State within thirty days of such notice. If as a result of said hearing the Secretary finds that there are violations and such violations result from a failure of the State to enforce all or any part of the State program effectively, and if he further finds that the State has not adequately demonstrated its capability and intent to enforce such State program, he shall give public notice of such finding. During the period beginning with such public notice and ending when such State satisfies the Secretary that it will enforce this chapter, the Secretary shall enforce, in the manner provided by this chapter, any permit condition required under this chapter, shall issue new or revised permits in accordance with requirements of this chapter, and may issue such notices and orders as are necessary for compliance therewith: *Provided*, That in the case of a State permittee who has met his obligations under such permit and who did not willfully secure the issuance of such permit through fraud or collusion, the Secretary shall give the permittee a reasonable time to conform ongoing surface mining and reclamation to the requirements of this chapter before suspending or revoking the State permit.

(c) Civil action for relief

The Secretary may request the Attorney General to institute a civil action for relief, including a permanent or temporary injunction, restraining order, or any other appropriate order in the district court of the United States for the district in which the surface coal mining and reclamation operation is located or in which the permittee thereof has his principal office, whenever such permittee or his agent (A) violates or fails or refuses to comply with any order or decision issued by the Secretary under this chapter, or (B) interferes with, hinders, or delays the Secretary or his authorized representatives in carrying out the provisions of this chapter, or (C) refuses to admit such authorized representative to the mine, or (D) refuses to permit inspection of the mine by such authorized representative, or (E) refuses to furnish any information or report requested by the Secretary in furtherance of the provisions of this chapter, or (F) refuses to permit access to, and copying of, such records as the Secretary determines necessary in carrying out the provisions of this chapter. Such court shall have jurisdiction to provide such relief as may be appropriate. Temporary restraining orders shall be issued in accordance with rule 65 of the Federal Rules of Civil Procedure, as amended. Any relief granted by the court to enforce an order under clause (A) of this section[1] shall continue in effect until the completion or final termination of all proceedings for review of such order under this subchapter, unless, prior thereto, the district court granting such relief sets it aside or modifies it.

(d) Sanctions; effect on additional enforcement rights under State law

As a condition of approval of any State program submitted pursuant to section 1253 of this title, the enforcement provisions thereof shall, at a minimum, incorporate sanctions no less stringent than those set forth in this section, and shall contain the same or similar procedural requirements relating thereto. Nothing herein shall be construed so as to eliminate any additional enforcement rights or procedures which are available under State law to a State regulatory authority but which are not specifically enumerated herein.

(Pub. L. 95–87, title V, § 521, Aug. 3, 1977, 91 Stat. 504.)

Editorial Notes

REFERENCES IN TEXT

Rule 65 of the Federal Rules of Civil Procedure, referred to in subsec. (c), is set out in the Appendix to Title 28, Judiciary and Judicial Procedure.

§ 1272. Designating areas unsuitable for surface coal mining

(a) Establishment of State planning process; standards; State process requirements; integration with present and future land use planning and regulation processes; savings provisions

(1) To be eligible to assume primary regulatory authority pursuant to section 1253 of this title, each State shall establish a planning process enabling objective decisions based upon competent and scientifically sound data and information as to which, if any, land areas of a State are unsuitable for all or certain types of surface coal mining operations pursuant to the standards set forth in paragraphs (2) and (3) of this subsection but such designation shall not prevent the mineral exploration pursuant to the chapter of any area so designated.

(2) Upon petition pursuant to subsection (c) of this section, the State regulatory authority shall designate an area as unsuitable for all or certain types of surface coal mining operations if the State regulatory authority determines that reclamation pursuant to the requirements of this chapter is not technologically and economically feasible.

(3) Upon petition pursuant to subsection (c) of this section, a surface area may be designated unsuitable for certain types of surface coal mining operations if such operations will—

[1] So in original. Probably should be ''subsection''.

other actions duly issued, made, or taken by or pursuant to act July 14, 1955, the Clean Air Act, as in effect immediately prior to the date of enactment of Pub. L. 95–95 [Aug. 7, 1977] to continue in full force and effect until modified or rescinded in accordance with act July 14, 1955, as amended by Pub. L. 95–95 [this chapter], see section 406(b) of Pub. L. 95–95, set out as an Effective Date of 1977 Amendment note under section 7401 of this title.

TERMINATION OF ADVISORY COMMITTEES

Advisory committees established after Jan. 5, 1973, to terminate not later than the expiration of the 2-year period beginning on the date of their establishment, unless, in the case of a committee established by the President or an officer of the Federal Government, such committee is renewed by appropriate action prior to the expiration of such 2-year period, or in the case of a committee established by the Congress, its duration is otherwise provided for by law. See section 14 of Pub. L. 92–463, Oct. 6, 1972, 86 Stat. 776, set out in the Appendix to Title 5, Government Organization and Employees.

ROLE OF SECONDARY STANDARDS

Pub. L. 101–549, title VIII, § 817, Nov. 15, 1990, 104 Stat. 2697, provided that:

''(a) REPORT.—The Administrator shall request the National Academy of Sciences to prepare a report to the Congress on the role of national secondary ambient air quality standards in protecting welfare and the environment. The report shall:

''(1) include information on the effects on welfare and the environment which are caused by ambient concentrations of pollutants listed pursuant to section 108 [42 U.S.C. 7408] and other pollutants which may be listed;

''(2) estimate welfare and environmental costs incurred as a result of such effects;

''(3) examine the role of secondary standards and the State implementation planning process in preventing such effects;

''(4) determine ambient concentrations of each such pollutant which would be adequate to protect welfare and the environment from such effects;

''(5) estimate the costs and other impacts of meeting secondary standards; and

''(6) consider other means consistent with the goals and objectives of the Clean Air Act [42 U.S.C. 7401 et seq.] which may be more effective than secondary standards in preventing or mitigating such effects.

''(b) SUBMISSION TO CONGRESS; COMMENTS; AUTHORIZATION.—(1) The report shall be transmitted to the Congress not later than 3 years after the date of enactment of the Clean Air Act Amendments of 1990 [Nov. 15, 1990].

''(2) At least 90 days before issuing a report the Administrator shall provide an opportunity for public comment on the proposed report. The Administrator shall include in the final report a summary of the comments received on the proposed report.

''(3) There are authorized to be appropriated such sums as are necessary to carry out this section.''

§ 7410. State implementation plans for national primary and secondary ambient air quality standards

(a) Adoption of plan by State; submission to Administrator; content of plan; revision; new sources; indirect source review program; supplemental or intermittent control systems

(1) Each State shall, after reasonable notice and public hearings, adopt and submit to the Administrator, within 3 years (or such shorter period as the Administrator may prescribe) after the promulgation of a national primary ambient air quality standard (or any revision thereof) under section 7409 of this title for any air pollutant, a plan which provides for implementation, maintenance, and enforcement of such primary standard in each air quality control region (or portion thereof) within such State. In addition, such State shall adopt and submit to the Administrator (either as a part of a plan submitted under the preceding sentence or separately) within 3 years (or such shorter period as the Administrator may prescribe) after the promulgation of a national ambient air quality secondary standard (or revision thereof), a plan which provides for implementation, maintenance, and enforcement of such secondary standard in each air quality control region (or portion thereof) within such State. Unless a separate public hearing is provided, each State shall consider its plan implementing such secondary standard at the hearing required by the first sentence of this paragraph.

(2) Each implementation plan submitted by a State under this chapter shall be adopted by the State after reasonable notice and public hearing. Each such plan shall—

(A) include enforceable emission limitations and other control measures, means, or techniques (including economic incentives such as fees, marketable permits, and auctions of emissions rights), as well as schedules and timetables for compliance, as may be necessary or appropriate to meet the applicable requirements of this chapter;

(B) provide for establishment and operation of appropriate devices, methods, systems, and procedures necessary to—

(i) monitor, compile, and analyze data on ambient air quality, and

(ii) upon request, make such data available to the Administrator;

(C) include a program to provide for the enforcement of the measures described in subparagraph (A), and regulation of the modification and construction of any stationary source within the areas covered by the plan as necessary to assure that national ambient air quality standards are achieved, including a permit program as required in parts C and D;

(D) contain adequate provisions—

(i) prohibiting, consistent with the provisions of this subchapter, any source or other type of emissions activity within the State from emitting any air pollutant in amounts which will—

(I) contribute significantly to nonattainment in, or interfere with maintenance by, any other State with respect to any such national primary or secondary ambient air quality standard, or

(II) interfere with measures required to be included in the applicable implementation plan for any other State under part C to prevent significant deterioration of air quality or to protect visibility,

(ii) insuring compliance with the applicable requirements of sections 7426 and 7415 of this title (relating to interstate and international pollution abatement);

(E) provide (i) necessary assurances that the State (or, except where the Administrator deems inappropriate, the general purpose local government or governments, or a regional

agency designated by the State or general purpose local governments for such purpose) will have adequate personnel, funding, and authority under State (and, as appropriate, local) law to carry out such implementation plan (and is not prohibited by any provision of Federal or State law from carrying out such implementation plan or portion thereof), (ii) requirements that the State comply with the requirements respecting State boards under section 7428 of this title, and (iii) necessary assurances that, where the State has relied on a local or regional government, agency, or instrumentality for the implementation of any plan provision, the State has responsibility for ensuring adequate implementation of such plan provision;

(F) require, as may be prescribed by the Administrator—

(i) the installation, maintenance, and replacement of equipment, and the implementation of other necessary steps, by owners or operators of stationary sources to monitor emissions from such sources,

(ii) periodic reports on the nature and amounts of emissions and emissions-related data from such sources, and

(iii) correlation of such reports by the State agency with any emission limitations or standards established pursuant to this chapter, which reports shall be available at reasonable times for public inspection;

(G) provide for authority comparable to that in section 7603 of this title and adequate contingency plans to implement such authority;

(H) provide for revision of such plan—

(i) from time to time as may be necessary to take account of revisions of such national primary or secondary ambient air quality standard or the availability of improved or more expeditious methods of attaining such standard, and

(ii) except as provided in paragraph (3)(C), whenever the Administrator finds on the basis of information available to the Administrator that the plan is substantially inadequate to attain the national ambient air quality standard which it implements or to otherwise comply with any additional requirements established under this chapter;

(I) in the case of a plan or plan revision for an area designated as a nonattainment area, meet the applicable requirements of part D (relating to nonattainment areas);

(J) meet the applicable requirements of section 7421 of this title (relating to consultation), section 7427 of this title (relating to public notification), and part C (relating to prevention of significant deterioration of air quality and visibility protection);

(K) provide for—

(i) the performance of such air quality modeling as the Administrator may prescribe for the purpose of predicting the effect on ambient air quality of any emissions of any air pollutant for which the Administrator has established a national ambient air quality standard, and

(ii) the submission, upon request, of data related to such air quality modeling to the Administrator;

(L) require the owner or operator of each major stationary source to pay to the permitting authority, as a condition of any permit required under this chapter, a fee sufficient to cover—

(i) the reasonable costs of reviewing and acting upon any application for such a permit, and

(ii) if the owner or operator receives a permit for such source, the reasonable costs of implementing and enforcing the terms and conditions of any such permit (not including any court costs or other costs associated with any enforcement action),

until such fee requirement is superseded with respect to such sources by the Administrator's approval of a fee program under subchapter V; and

(M) provide for consultation and participation by local political subdivisions affected by the plan.

(3)(A) Repealed. Pub. L. 101–549, title I, §101(d)(1), Nov. 15, 1990, 104 Stat. 2409.

(B) As soon as practicable, the Administrator shall, consistent with the purposes of this chapter and the Energy Supply and Environmental Coordination Act of 1974 [15 U.S.C. 791 et seq.], review each State's applicable implementation plans and report to the State on whether such plans can be revised in relation to fuel burning stationary sources (or persons supplying fuel to such sources) without interfering with the attainment and maintenance of any national ambient air quality standard within the period permitted in this section. If the Administrator determines that any such plan can be revised, he shall notify the State that a plan revision may be submitted by the State. Any plan revision which is submitted by the State shall, after public notice and opportunity for public hearing, be approved by the Administrator if the revision relates only to fuel burning stationary sources (or persons supplying fuel to such sources), and the plan as revised complies with paragraph (2) of this subsection. The Administrator shall approve or disapprove any revision no later than three months after its submission.

(C) Neither the State, in the case of a plan (or portion thereof) approved under this subsection, nor the Administrator, in the case of a plan (or portion thereof) promulgated under subsection (c), shall be required to revise an applicable implementation plan because one or more exemptions under section 7418 of this title (relating to Federal facilities), enforcement orders under section 7413(d)[1] of this title, suspensions under subsection (f) or (g) (relating to temporary energy or economic authority), orders under section 7419 of this title (relating to primary nonferrous smelters), or extensions of compliance in decrees entered under section 7413(e)[1] of this title (relating to iron- and steel-producing operations) have been granted, if such plan would have met the requirements of this section if no such exemptions, orders, or extensions had been granted.

(4) Repealed. Pub. L. 101–549, title I, §101(d)(2), Nov. 15, 1990, 104 Stat. 2409.

[1] See References in Text note below.

(5)(A)(i) Any State may include in a State implementation plan, but the Administrator may not require as a condition of approval of such plan under this section, any indirect source review program. The Administrator may approve and enforce, as part of an applicable implementation plan, an indirect source review program which the State chooses to adopt and submit as part of its plan.

(ii) Except as provided in subparagraph (B), no plan promulgated by the Administrator shall include any indirect source review program for any air quality control region, or portion thereof.

(iii) Any State may revise an applicable implementation plan approved under this subsection to suspend or revoke any such program included in such plan, provided that such plan meets the requirements of this section.

(B) The Administrator shall have the authority to promulgate, implement and enforce regulations under subsection (c) respecting indirect source review programs which apply only to federally assisted highways, airports, and other major federally assisted indirect sources and federally owned or operated indirect sources.

(C) For purposes of this paragraph, the term ''indirect source'' means a facility, building, structure, installation, real property, road, or highway which attracts, or may attract, mobile sources of pollution. Such term includes parking lots, parking garages, and other facilities subject to any measure for management of parking supply (within the meaning of subsection (c)(2)(D)(ii)), including regulation of existing off-street parking but such term does not include new or existing on-street parking. Direct emissions sources or facilities at, within, or associated with, any indirect source shall not be deemed indirect sources for the purpose of this paragraph.

(D) For purposes of this paragraph the term ''indirect source review program'' means the facility-by-facility review of indirect sources of air pollution, including such measures as are necessary to assure, or assist in assuring, that a new or modified indirect source will not attract mobile sources of air pollution, the emissions from which would cause or contribute to air pollution concentrations—

(i) exceeding any national primary ambient air quality standard for a mobile source-related air pollutant after the primary standard attainment date, or

(ii) preventing maintenance of any such standard after such date.

(E) For purposes of this paragraph and paragraph (2)(B), the term ''transportation control measure'' does not include any measure which is an ''indirect source review program''.

(6) No State plan shall be treated as meeting the requirements of this section unless such plan provides that in the case of any source which uses a supplemental, or intermittent control system for purposes of meeting the requirements of an order under section 7413(d)[1] of this title or section 7419 of this title (relating to primary nonferrous smelter orders), the owner or operator of such source may not temporarily reduce the pay of any employee by reason of the use of such supplemental or intermittent or other dispersion dependent control system.

(b) Extension of period for submission of plans

The Administrator may, wherever he determines necessary, extend the period for submission of any plan or portion thereof which implements a national secondary ambient air quality standard for a period not to exceed 18 months from the date otherwise required for submission of such plan.

(c) Preparation and publication by Administrator of proposed regulations setting forth implementation plan; transportation regulations study and report; parking surcharge; suspension authority; plan implementation

(1) The Administrator shall promulgate a Federal implementation plan at any time within 2 years after the Administrator—

(A) finds that a State has failed to make a required submission or finds that the plan or plan revision submitted by the State does not satisfy the minimum criteria established under subsection (k)(1)(A), or

(B) disapproves a State implementation plan submission in whole or in part,

unless the State corrects the deficiency, and the Administrator approves the plan or plan revision, before the Administrator promulgates such Federal implementation plan.

(2)(A) Repealed. Pub. L. 101–549, title I, § 101(d)(3)(A), Nov. 15, 1990, 104 Stat. 2409.

(B) No parking surcharge regulation may be required by the Administrator under paragraph (1) of this subsection as a part of an applicable implementation plan. All parking surcharge regulations previously required by the Administrator shall be void upon June 22, 1974. This subparagraph shall not prevent the Administrator from approving parking surcharges if they are adopted and submitted by a State as part of an applicable implementation plan. The Administrator may not condition approval of any implementation plan submitted by a State on such plan's including a parking surcharge regulation.

(C) Repealed. Pub. L. 101–549, title I, § 101(d)(3)(B), Nov. 15, 1990, 104 Stat. 2409.

(D) For purposes of this paragraph—

(i) The term ''parking surcharge regulation'' means a regulation imposing or requiring the imposition of any tax, surcharge, fee, or other charge on parking spaces, or any other area used for the temporary storage of motor vehicles.

(ii) The term ''management of parking supply'' shall include any requirement providing that any new facility containing a given number of parking spaces shall receive a permit or other prior approval, issuance of which is to be conditioned on air quality considerations.

(iii) The term ''preferential bus/carpool lane'' shall include any requirement for the setting aside of one or more lanes of a street or highway on a permanent or temporary basis for the exclusive use of buses or carpools, or both.

(E) No standard, plan, or requirement, relating to management of parking supply or preferential bus/carpool lanes shall be promulgated after June 22, 1974, by the Administrator pursuant to this section, unless such promulgation has been subjected to at least one public hearing

which has been held in the area affected and for which reasonable notice has been given in such area. If substantial changes are made following public hearings, one or more additional hearings shall be held in such area after such notice.

(3) Upon application of the chief executive officer of any general purpose unit of local government, if the Administrator determines that such unit has adequate authority under State or local law, the Administrator may delegate to such unit the authority to implement and enforce within the jurisdiction of such unit any part of a plan promulgated under this subsection. Nothing in this paragraph shall prevent the Administrator from implementing or enforcing any applicable provision of a plan promulgated under this subsection.

(4) Repealed. Pub. L. 101–549, title I, § 101(d)(3)(C), Nov. 15, 1990, 104 Stat. 2409.

(5)(A) Any measure in an applicable implementation plan which requires a toll or other charge for the use of a bridge located entirely within one city shall be eliminated from such plan by the Administrator upon application by the Governor of the State, which application shall include a certification by the Governor that he will revise such plan in accordance with subparagraph (B).

(B) In the case of any applicable implementation plan with respect to which a measure has been eliminated under subparagraph (A), such plan shall, not later than one year after August 7, 1977, be revised to include comprehensive measures to:

(i) establish, expand, or improve public transportation measures to meet basic transportation needs, as expeditiously as is practicable; and

(ii) implement transportation control measures necessary to attain and maintain national ambient air quality standards,

and such revised plan shall, for the purpose of implementing such comprehensive public transportation measures, include requirements to use (insofar as is necessary) Federal grants, State or local funds, or any combination of such grants and funds as may be consistent with the terms of the legislation providing such grants and funds. Such measures shall, as a substitute for the tolls or charges eliminated under subparagraph (A), provide for emissions reductions equivalent to the reductions which may reasonably be expected to be achieved through the use of the tolls or charges eliminated.

(C) Any revision of an implementation plan for purposes of meeting the requirements of subparagraph (B) shall be submitted in coordination with any plan revision required under part D.

(d), (e) Repealed. Pub. L. 101–549, title I, § 101(d)(4), (5), Nov. 15, 1990, 104 Stat. 2409

(f) National or regional energy emergencies; determination by President

(1) Upon application by the owner or operator of a fuel burning stationary source, and after notice and opportunity for public hearing, the Governor of the State in which such source is located may petition the President to determine that a national or regional energy emergency exists of such severity that—

(A) a temporary suspension of any part of the applicable implementation plan or of any requirement under section 7651j of this title (concerning excess emissions penalties or offsets) may be necessary, and

(B) other means of responding to the energy emergency may be inadequate.

Such determination shall not be delegable by the President to any other person. If the President determines that a national or regional energy emergency of such severity exists, a temporary emergency suspension of any part of an applicable implementation plan or of any requirement under section 7651j of this title (concerning excess emissions penalties or offsets) adopted by the State may be issued by the Governor of any State covered by the President's determination under the condition specified in paragraph (2) and may take effect immediately.

(2) A temporary emergency suspension under this subsection shall be issued to a source only if the Governor of such State finds that—

(A) there exists in the vicinity of such source a temporary energy emergency involving high levels of unemployment or loss of necessary energy supplies for residential dwellings; and

(B) such unemployment or loss can be totally or partially alleviated by such emergency suspension.

Not more than one such suspension may be issued for any source on the basis of the same set of circumstances or on the basis of the same emergency.

(3) A temporary emergency suspension issued by a Governor under this subsection shall remain in effect for a maximum of four months or such lesser period as may be specified in a disapproval order of the Administrator, if any. The Administrator may disapprove such suspension if he determines that it does not meet the requirements of paragraph (2).

(4) This subsection shall not apply in the case of a plan provision or requirement promulgated by the Administrator under subsection (c) of this section, but in any such case the President may grant a temporary emergency suspension for a four month period of any such provision or requirement if he makes the determinations and findings specified in paragraphs (1) and (2).

(5) The Governor may include in any temporary emergency suspension issued under this subsection a provision delaying for a period identical to the period of such suspension any compliance schedule (or increment of progress) to which such source is subject under section 1857c–10[1] of this title, as in effect before August 7, 1977, or section 7413(d)[1] of this title, upon a finding that such source is unable to comply with such schedule (or increment) solely because of the conditions on the basis of which a suspension was issued under this subsection.

(g) Governor's authority to issue temporary emergency suspensions

(1) In the case of any State which has adopted and submitted to the Administrator a proposed plan revision which the State determines—

(A) meets the requirements of this section, and

(B) is necessary (i) to prevent the closing for one year or more of any source of air pollution, and (ii) to prevent substantial increases in unemployment which would result from such closing, and

which the Administrator has not approved or disapproved under this section within 12 months of submission of the proposed plan revision, the Governor may issue a temporary emergency suspension of the part of the applicable implementation plan for such State which is proposed to be revised with respect to such source. The determination under subparagraph (B) may not be made with respect to a source which would close without regard to whether or not the proposed plan revision is approved.

(2) A temporary emergency suspension issued by a Governor under this subsection shall remain in effect for a maximum of four months or such lesser period as may be specified in a disapproval order of the Administrator. The Administrator may disapprove such suspension if he determines that it does not meet the requirements of this subsection.

(3) The Governor may include in any temporary emergency suspension issued under this subsection a provision delaying for a period identical to the period of such suspension any compliance schedule (or increment of progress) to which such source is subject under section 1857c–10[1] of this title as in effect before August 7, 1977, or under section 7413(d)[1] of this title upon a finding that such source is unable to comply with such schedule (or increment) solely because of the conditions on the basis of which a suspension was issued under this subsection.

(h) Publication of comprehensive document for each State setting forth requirements of applicable implementation plan

(1) Not later than 5 years after November 15, 1990, and every 3 years thereafter, the Administrator shall assemble and publish a comprehensive document for each State setting forth all requirements of the applicable implementation plan for such State and shall publish notice in the Federal Register of the availability of such documents.

(2) The Administrator may promulgate such regulations as may be reasonably necessary to carry out the purpose of this subsection.

(i) Modification of requirements prohibited

Except for a primary nonferrous smelter order under section 7419 of this title, a suspension under subsection (f) or (g) (relating to emergency suspensions), an exemption under section 7418 of this title (relating to certain Federal facilities), an order under section 7413(d)[1] of this title (relating to compliance orders), a plan promulgation under subsection (c), or a plan revision under subsection (a)(3); no order, suspension, plan revision, or other action modifying any requirement of an applicable implementation plan may be taken with respect to any stationary source by the State or by the Administrator.

(j) Technological systems of continuous emission reduction on new or modified stationary sources; compliance with performance standards

As a condition for issuance of any permit required under this subchapter, the owner or operator of each new or modified stationary source which is required to obtain such a permit must show to the satisfaction of the permitting authority that the technological system of continuous emission reduction which is to be used at such source will enable it to comply with the standards of performance which are to apply to such source and that the construction or modification and operation of such source will be in compliance with all other requirements of this chapter.

(k) Environmental Protection Agency action on plan submissions

(1) Completeness of plan submissions

(A) Completeness criteria

Within 9 months after November 15, 1990, the Administrator shall promulgate minimum criteria that any plan submission must meet before the Administrator is required to act on such submission under this subsection. The criteria shall be limited to the information necessary to enable the Administrator to determine whether the plan submission complies with the provisions of this chapter.

(B) Completeness finding

Within 60 days of the Administrator's receipt of a plan or plan revision, but no later than 6 months after the date, if any, by which a State is required to submit the plan or revision, the Administrator shall determine whether the minimum criteria established pursuant to subparagraph (A) have been met. Any plan or plan revision that a State submits to the Administrator, and that has not been determined by the Administrator (by the date 6 months after receipt of the submission) to have failed to meet the minimum criteria established pursuant to subparagraph (A), shall on that date be deemed by operation of law to meet such minimum criteria.

(C) Effect of finding of incompleteness

Where the Administrator determines that a plan submission (or part thereof) does not meet the minimum criteria established pursuant to subparagraph (A), the State shall be treated as not having made the submission (or, in the Administrator's discretion, part thereof).

(2) Deadline for action

Within 12 months of a determination by the Administrator (or a determination deemed by operation of law) under paragraph (1) that a State has submitted a plan or plan revision (or, in the Administrator's discretion, part thereof) that meets the minimum criteria established pursuant to paragraph (1), if applicable (or, if those criteria are not applicable, within 12 months of submission of the plan or revision), the Administrator shall act on the submission in accordance with paragraph (3).

(3) Full and partial approval and disapproval

In the case of any submittal on which the Administrator is required to act under paragraph (2), the Administrator shall approve such submittal as a whole if it meets all of the applicable requirements of this chapter. If a portion of the plan revision meets all the applicable requirements of this chapter, the Administrator may approve the plan revision in part and disapprove the plan revision in part. The plan revision shall not be treated as meeting the requirements of this chapter until the Administrator approves the entire plan revision as complying with the applicable requirements of this chapter.

(4) Conditional approval

The Administrator may approve a plan revision based on a commitment of the State to adopt specific enforceable measures by a date certain, but not later than 1 year after the date of approval of the plan revision. Any such conditional approval shall be treated as a disapproval if the State fails to comply with such commitment.

(5) Calls for plan revisions

Whenever the Administrator finds that the applicable implementation plan for any area is substantially inadequate to attain or maintain the relevant national ambient air quality standard, to mitigate adequately the interstate pollutant transport described in section 7506a of this title or section 7511c of this title, or to otherwise comply with any requirement of this chapter, the Administrator shall require the State to revise the plan as necessary to correct such inadequacies. The Administrator shall notify the State of the inadequacies, and may establish reasonable deadlines (not to exceed 18 months after the date of such notice) for the submission of such plan revisions. Such findings and notice shall be public. Any finding under this paragraph shall, to the extent the Administrator deems appropriate, subject the State to the requirements of this chapter to which the State was subject when it developed and submitted the plan for which such finding was made, except that the Administrator may adjust any dates applicable under such requirements as appropriate (except that the Administrator may not adjust any attainment date prescribed under part D, unless such date has elapsed).

(6) Corrections

Whenever the Administrator determines that the Administrator's action approving, disapproving, or promulgating any plan or plan revision (or part thereof), area designation, redesignation, classification, or reclassification was in error, the Administrator may in the same manner as the approval, disapproval, or promulgation revise such action as appropriate without requiring any further submission from the State. Such determination and the basis thereof shall be provided to the State and public.

(*l*) Plan revisions

Each revision to an implementation plan submitted by a State under this chapter shall be adopted by such State after reasonable notice and public hearing. The Administrator shall not approve a revision of a plan if the revision would interfere with any applicable requirement concerning attainment and reasonable further progress (as defined in section 7501 of this title), or any other applicable requirement of this chapter.

(m) Sanctions

The Administrator may apply any of the sanctions listed in section 7509(b) of this title at any time (or at any time after) the Administrator makes a finding, disapproval, or determination under paragraphs (1) through (4), respectively, of section 7509(a) of this title in relation to any plan or plan item (as that term is defined by the Administrator) required under this chapter, with respect to any portion of the State the Administrator determines reasonable and appropriate, for the purpose of ensuring that the requirements of this chapter relating to such plan or plan item are met. The Administrator shall, by rule, establish criteria for exercising his authority under the previous sentence with respect to any deficiency referred to in section 7509(a) of this title to ensure that, during the 24-month period following the finding, disapproval, or determination referred to in section 7509(a) of this title, such sanctions are not applied on a statewide basis where one or more political subdivisions covered by the applicable implementation plan are principally responsible for such deficiency.

(n) Savings clauses

(1) Existing plan provisions

Any provision of any applicable implementation plan that was approved or promulgated by the Administrator pursuant to this section as in effect before November 15, 1990, shall remain in effect as part of such applicable implementation plan, except to the extent that a revision to such provision is approved or promulgated by the Administrator pursuant to this chapter.

(2) Attainment dates

For any area not designated nonattainment, any plan or plan revision submitted or required to be submitted by a State—

(A) in response to the promulgation or revision of a national primary ambient air quality standard in effect on November 15, 1990, or

(B) in response to a finding of substantial inadequacy under subsection (a)(2) (as in effect immediately before November 15, 1990),

shall provide for attainment of the national primary ambient air quality standards within 3 years of November 15, 1990, or within 5 years of issuance of such finding of substantial inadequacy, whichever is later.

(3) Retention of construction moratorium in certain areas

In the case of an area to which, immediately before November 15, 1990, the prohibition on construction or modification of major stationary sources prescribed in subsection (a)(2)(I) (as in effect immediately before November 15, 1990) applied by virtue of a finding

of the Administrator that the State containing such area had not submitted an implementation plan meeting the requirements of section 7502(b)(6) of this title (relating to establishment of a permit program) (as in effect immediately before November 15, 1990) or 7502(a)(1) of this title (to the extent such requirements relate to provision for attainment of the primary national ambient air quality standard for sulfur oxides by December 31, 1982) as in effect immediately before November 15, 1990, no major stationary source of the relevant air pollutant or pollutants shall be constructed or modified in such area until the Administrator finds that the plan for such area meets the applicable requirements of section 7502(c)(5) of this title (relating to permit programs) or subpart 5 of part D (relating to attainment of the primary national ambient air quality standard for sulfur dioxide), respectively.

(*o*) Indian tribes

If an Indian tribe submits an implementation plan to the Administrator pursuant to section 7601(d) of this title, the plan shall be reviewed in accordance with the provisions for review set forth in this section for State plans, except as otherwise provided by regulation promulgated pursuant to section 7601(d)(2) of this title. When such plan becomes effective in accordance with the regulations promulgated under section 7601(d) of this title, the plan shall become applicable to all areas (except as expressly provided otherwise in the plan) located within the exterior boundaries of the reservation, notwithstanding the issuance of any patent and including rights-of-way running through the reservation.

(p) Reports

Any State shall submit, according to such schedule as the Administrator may prescribe, such reports as the Administrator may require relating to emission reductions, vehicle miles traveled, congestion levels, and any other information the Administrator may deem necessary to assess the development[2] effectiveness, need for revision, or implementation of any plan or plan revision required under this chapter.

(July 14, 1955, ch. 360, title I, §110, as added Pub. L. 91–604, §4(a), Dec. 31, 1970, 84 Stat. 1680; amended Pub. L. 93–319, §4, June 22, 1974, 88 Stat. 256; Pub. L. 95–95, title I, §§107, 108, Aug. 7, 1977, 91 Stat. 691, 693; Pub. L. 95–190, §14(a)(1)–(6), Nov. 16, 1977, 91 Stat. 1399; Pub. L. 97–23, §3, July 17, 1981, 95 Stat. 142; Pub. L. 101–549, title I, §§101(b)–(d), 102(h), 107(c), 108(d), title IV, §412, Nov. 15, 1990, 104 Stat. 2404–2408, 2422, 2464, 2466, 2634.)

Editorial Notes

REFERENCES IN TEXT

The Energy Supply and Environmental Coordination Act of 1974, referred to in subsec. (a)(3)(B), is Pub. L. 93–319, June 22, 1974, 88 Stat. 246, as amended, which is classified principally to chapter 16C (§791 et seq.) of Title 15, Commerce and Trade. For complete classification of this Act to the Code, see Short Title note set out under section 791 of Title 15 and Tables.

[2] So in original. Probably should be followed by a comma.

Section 7413 of this title, referred to in subsecs. (a)(3)(C), (6), (f)(5), (g)(3), and (i), was amended generally by Pub. L. 101–549, title VII, §701, Nov. 15, 1990, 104 Stat. 2672, and, as so amended, subsecs. (d) and (e) of section 7413 no longer relates to final compliance orders and steel industry compliance extension, respectively.

Section 1857c–10 of this title, as in effect before August 7, 1977, referred to in subsecs. (f)(5) and (g)(3), was in the original ''section 119, as in effect before the date of the enactment of this paragraph'', meaning section 119 of act July 14, 1955, ch. 360, title I, as added June 22, 1974, Pub. L. 93–319, §3, 88 Stat. 248, (which was classified to section 1857c–10 of this title) as in effect prior to the enactment of subsecs. (f)(5) and (g)(3) of this section by Pub. L. 95–95, §107, Aug. 7, 1977, 91 Stat. 691, effective Aug. 7, 1977. Section 112(b)(1) of Pub. L. 95–95 repealed section 119 of act July 14, 1955, ch. 360, title I, as added by Pub. L. 93–319, and provided that all references to such section 119 in any subsequent enactment which supersedes Pub. L. 93–319 shall be construed to refer to section 113(d) of the Clean Air Act and to paragraph (5) thereof in particular which is classified to section 7413(d)(5) of this title. Section 7413 of this title was subsequently amended generally by Pub. L. 101–549, title VII, §701, Nov. 15, 1990, 104 Stat. 2672, see note above. Section 117(b) of Pub. L. 95–95 added a new section 119 of act July 14, 1955, which is classified to section 7419 of this title.

CODIFICATION

Section was formerly classified to section 1857c–5 of this title.

PRIOR PROVISIONS

A prior section 110 of act July 14, 1955, was renumbered section 117 by Pub. L. 91–604 and is classified to section 7417 of this title.

AMENDMENTS

1990—Subsec. (a)(1). Pub. L. 101–549, §101(d)(8), substituted ''3 years (or such shorter period as the Administrator may prescribe)'' for ''nine months'' in two places.

Subsec. (a)(2). Pub. L. 101–549, §101(b), amended par. (2) generally, substituting present provisions for provisions setting the time within which the Administrator was to approve or disapprove a plan or portion thereof and listing the conditions under which the plan or portion thereof was to be approved after reasonable notice and hearing.

Subsec. (a)(3)(A). Pub. L. 101–549, §101(d)(1), struck out subpar. (A) which directed Administrator to approve any revision of an implementation plan if it met certain requirements and had been adopted by the State after reasonable notice and public hearings.

Subsec. (a)(3)(D). Pub. L. 101–549, §101(d)(1), struck out subpar. (D) which directed that certain implementation plans be revised to include comprehensive measures and requirements.

Subsec. (a)(4). Pub. L. 101–549, §101(d)(2), struck out par. (4) which set forth requirements for review procedure.

Subsec. (c)(1). Pub. L. 101–549, §102(h), amended par. (1) generally, substituting present provisions for provisions relating to preparation and publication of regulations setting forth an implementation plan, after opportunity for a hearing, upon failure of a State to make required submission or revision.

Subsec. (c)(2)(A). Pub. L. 101–549, §101(d)(3)(A), struck out subpar. (A) which required a study and report on necessity of parking surcharge, management of parking supply, and preferential bus/carpool lane regulations to achieve and maintain national primary ambient air quality standards.

Subsec. (c)(2)(C). Pub. L. 101–549, §101(d)(3)(B), struck out subpar. (C) which authorized suspension of certain regulations and requirements relating to management of parking supply.

duties under act July 14, 1955, the Clean Air Act, as in effect immediately prior to the enactment of Pub. L. 95–95 [Aug. 7, 1977], not to abate by reason of the taking effect of Pub. L. 95–95, see section 406(a) of Pub. L. 95–95, set out as an Effective Date of 1977 Amendment note under section 7401 of this title.

MODIFICATION OR RESCISSION OF RULES, REGULATIONS, ORDERS, DETERMINATIONS, CONTRACTS, CERTIFICATIONS, AUTHORIZATIONS, DELEGATIONS, AND OTHER ACTIONS

All rules, regulations, orders, determinations, contracts, certifications, authorizations, delegations, or other actions duly issued, made, or taken by or pursuant to act July 14, 1955, the Clean Air Act, as in effect immediately prior to the date of enactment of Pub. L. 95–95 [Aug. 7, 1977] to continue in full force and effect until modified or rescinded in accordance with act July 14, 1955, as amended by Pub. L. 95–95 [this chapter], see section 406(b) of Pub. L. 95–95, set out as an Effective Date of 1977 Amendment note under section 7401 of this title.

MODIFICATION OR RESCISSION OF IMPLEMENTATION PLANS APPROVED AND IN EFFECT PRIOR TO AUG. 7, 1977

Nothing in the Clean Air Act Amendments of 1977 [Pub. L. 95–95] to affect any requirement of an approved implementation plan under this section or any other provision in effect under this chapter before Aug. 7, 1977, until modified or rescinded in accordance with this chapter as amended by the Clean Air Act Amendments of 1977, see section 406(c) of Pub. L. 95–95, set out as an Effective Date of 1977 Amendment note under section 7401 of this title.

SAVINGS PROVISION

Pub. L. 91–604, § 16, Dec. 31, 1970, 84 Stat. 1713, provided that:

''(a)(1) Any implementation plan adopted by any State and submitted to the Secretary of Health, Education, and Welfare, or to the Administrator pursuant to the Clean Air Act [this chapter] prior to enactment of this Act [Dec. 31, 1970] may be approved under section 110 of the Clean Air Act [this section] (as amended by this Act) [Pub. L. 91–604] and shall remain in effect, unless the Administrator determines that such implementation plan, or any portion thereof, is not consistent with applicable requirements of the Clean Air Act [this chapter] (as amended by this Act) and will not provide for the attainment of national primary ambient air quality standards in the time required by such Act. If the Administrator so determines, he shall, within 90 days after promulgation of any national ambient air quality standards pursuant to section 109(a) of the Clean Air Act [section 7409(a) of this title], notify the State and specify in what respects changes are needed to meet the additional requirements of such Act, including requirements to implement national secondary ambient air quality standards. If such changes are not adopted by the State after public hearings and within six months after such notification, the Administrator shall promulgate such changes pursuant to section 110(c) of such Act [subsec. (c) of this section].

''(2) The amendments made by section 4(b) [amending sections 7403 and 7415 of this title] shall not be construed as repealing or modifying the powers of the Administrator with respect to any conference convened under section 108(d) of the Clean Air Act [section 7415 of this title] before the date of enactment of this Act [Dec. 31, 1970].

''(b) Regulations or standards issued under this title II of the Clean Air Act [subchapter II of this chapter] prior to the enactment of this Act [Dec. 31, 1970] shall continue in effect until revised by the Administrator consistent with the purposes of such Act [this chapter].''

FEDERAL ENERGY ADMINISTRATOR

''Federal Energy Administrator'', for purposes of this chapter, to mean Administrator of Federal Energy Administration established by Pub. L. 93–275, May 7, 1974, 88 Stat. 97, which is classified to section 761 et seq. of Title 15, Commerce and Trade, but with the term to mean any officer of the United States designated as such by the President until Federal Energy Administrator takes office and after Federal Energy Administration ceases to exist, see section 798 of Title 15, Commerce and Trade.

Federal Energy Administration terminated and functions vested by law in Administrator thereof transferred to Secretary of Energy (unless otherwise specifically provided) by sections 7151(a) and 7293 of this title.

§ 7411. Standards of performance for new stationary sources

(a) Definitions

For purposes of this section:

(1) The term ''standard of performance'' means a standard for emissions of air pollutants which reflects the degree of emission limitation achievable through the application of the best system of emission reduction which (taking into account the cost of achieving such reduction and any nonair quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated.

(2) The term ''new source'' means any stationary source, the construction or modification of which is commenced after the publication of regulations (or, if earlier, proposed regulations) prescribing a standard of performance under this section which will be applicable to such source.

(3) The term ''stationary source'' means any building, structure, facility, or installation which emits or may emit any air pollutant. Nothing in subchapter II of this chapter relating to nonroad engines shall be construed to apply to stationary internal combustion engines.

(4) The term ''modification'' means any physical change in, or change in the method of operation of, a stationary source which increases the amount of any air pollutant emitted by such source or which results in the emission of any air pollutant not previously emitted.

(5) The term ''owner or operator'' means any person who owns, leases, operates, controls, or supervises a stationary source.

(6) The term ''existing source'' means any stationary source other than a new source.

(7) The term ''technological system of continuous emission reduction'' means—

(A) a technological process for production or operation by any source which is inherently low-polluting or nonpolluting, or

(B) a technological system for continuous reduction of the pollution generated by a source before such pollution is emitted into the ambient air, including precombustion cleaning or treatment of fuels.

(8) A conversion to coal (A) by reason of an order under section 2(a) of the Energy Supply and Environmental Coordination Act of 1974 [15 U.S.C. 792(a)] or any amendment thereto, or any subsequent enactment which supersedes such Act [15 U.S.C. 791 et seq.], or (B) which qualifies under section 7413(d)(5)(A)(ii)[1]

[1] See References in Text note below.

of this title, shall not be deemed to be a modification for purposes of paragraphs (2) and (4) of this subsection.

(b) List of categories of stationary sources; standards of performance; information on pollution control techniques; sources owned or operated by United States; particular systems; revised standards

(1)(A) The Administrator shall, within 90 days after December 31, 1970, publish (and from time to time thereafter shall revise) a list of categories of stationary sources. He shall include a category of sources in such list if in his judgment it causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare.

(B) Within one year after the inclusion of a category of stationary sources in a list under subparagraph (A), the Administrator shall publish proposed regulations, establishing Federal standards of performance for new sources within such category. The Administrator shall afford interested persons an opportunity for written comment on such proposed regulations. After considering such comments, he shall promulgate, within one year after such publication, such standards with such modifications as he deems appropriate. The Administrator shall, at least every 8 years, review and, if appropriate, revise such standards following the procedure required by this subsection for promulgation of such standards. Notwithstanding the requirements of the previous sentence, the Administrator need not review any such standard if the Administrator determines that such review is not appropriate in light of readily available information on the efficacy of such standard. Standards of performance or revisions thereof shall become effective upon promulgation. When implementation and enforcement of any requirement of this chapter indicate that emission limitations and percent reductions beyond those required by the standards promulgated under this section are achieved in practice, the Administrator shall, when revising standards promulgated under this section, consider the emission limitations and percent reductions achieved in practice.

(2) The Administrator may distinguish among classes, types, and sizes within categories of new sources for the purpose of establishing such standards.

(3) The Administrator shall, from time to time, issue information on pollution control techniques for categories of new sources and air pollutants subject to the provisions of this section.

(4) The provisions of this section shall apply to any new source owned or operated by the United States.

(5) Except as otherwise authorized under subsection (h), nothing in this section shall be construed to require, or to authorize the Administrator to require, any new or modified source to install and operate any particular technological system of continuous emission reduction to comply with any new source standard of performance.

(6) The revised standards of performance required by enactment of subsection (a)(1)(A)(i) and (ii)[1] shall be promulgated not later than one year after August 7, 1977. Any new or modified fossil fuel fired stationary source which commences construction prior to the date of publication of the proposed revised standards shall not be required to comply with such revised standards.

(c) State implementation and enforcement of standards of performance

(1) Each State may develop and submit to the Administrator a procedure for implementing and enforcing standards of performance for new sources located in such State. If the Administrator finds the State procedure is adequate, he shall delegate to such State any authority he has under this chapter to implement and enforce such standards.

(2) Nothing in this subsection shall prohibit the Administrator from enforcing any applicable standard of performance under this section.

(d) Standards of performance for existing sources; remaining useful life of source

(1) The Administrator shall prescribe regulations which shall establish a procedure similar to that provided by section 7410 of this title under which each State shall submit to the Administrator a plan which (A) establishes standards of performance for any existing source for any air pollutant (i) for which air quality criteria have not been issued or which is not included on a list published under section 7408(a) of this title or emitted from a source category which is regulated under section 7412 of this title but (ii) to which a standard of performance under this section would apply if such existing source were a new source, and (B) provides for the implementation and enforcement of such standards of performance. Regulations of the Administrator under this paragraph shall permit the State in applying a standard of performance to any particular source under a plan submitted under this paragraph to take into consideration, among other factors, the remaining useful life of the existing source to which such standard applies.

(2) The Administrator shall have the same authority—

(A) to prescribe a plan for a State in cases where the State fails to submit a satisfactory plan as he would have under section 7410(c) of this title in the case of failure to submit an implementation plan, and

(B) to enforce the provisions of such plan in cases where the State fails to enforce them as he would have under sections 7413 and 7414 of this title with respect to an implementation plan.

In promulgating a standard of performance under a plan prescribed under this paragraph, the Administrator shall take into consideration, among other factors, remaining useful lives of the sources in the category of sources to which such standard applies.

(e) Prohibited acts

After the effective date of standards of performance promulgated under this section, it shall be unlawful for any owner or operator of any new source to operate such source in violation of any standard of performance applicable to such source.

(f) New source standards of performance

(1) For those categories of major stationary sources that the Administrator listed under subsection (b)(1)(A) before November 15, 1990, and for which regulations had not been proposed by the Administrator by November 15, 1990, the Administrator shall—

(A) propose regulations establishing standards of performance for at least 25 percent of such categories of sources within 2 years after November 15, 1990;

(B) propose regulations establishing standards of performance for at least 50 percent of such categories of sources within 4 years after November 15, 1990; and

(C) propose regulations for the remaining categories of sources within 6 years after November 15, 1990.

(2) In determining priorities for promulgating standards for categories of major stationary sources for the purpose of paragraph (1), the Administrator shall consider—

(A) the quantity of air pollutant emissions which each such category will emit, or will be designed to emit;

(B) the extent to which each such pollutant may reasonably be anticipated to endanger public health or welfare; and

(C) the mobility and competitive nature of each such category of sources and the consequent need for nationally applicable new source standards of performance.

(3) Before promulgating any regulations under this subsection or listing any category of major stationary sources as required under this subsection, the Administrator shall consult with appropriate representatives of the Governors and of State air pollution control agencies.

(g) Revision of regulations

(1) Upon application by the Governor of a State showing that the Administrator has failed to specify in regulations under subsection (f)(1) any category of major stationary sources required to be specified under such regulations, the Administrator shall revise such regulations to specify any such category.

(2) Upon application of the Governor of a State, showing that any category of stationary sources which is not included in the list under subsection (b)(1)(A) contributes significantly to air pollution which may reasonably be anticipated to endanger public health or welfare (notwithstanding that such category is not a category of major stationary sources), the Administrator shall revise such regulations to specify such category of stationary sources.

(3) Upon application of the Governor of a State showing that the Administrator has failed to apply properly the criteria required to be considered under subsection (f)(2), the Administrator shall revise the list under subsection (b)(1)(A) to apply properly such criteria.

(4) Upon application of the Governor of a State showing that—

(A) a new, innovative, or improved technology or process which achieves greater continuous emission reduction has been adequately demonstrated for any category of stationary sources, and

(B) as a result of such technology or process, the new source standard of performance in effect under this section for such category no longer reflects the greatest degree of emission limitation achievable through application of the best technological system of continuous emission reduction which (taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impact and energy requirements) has been adequately demonstrated,

the Administrator shall revise such standard of performance for such category accordingly.

(5) Unless later deadlines for action of the Administrator are otherwise prescribed under this section, the Administrator shall, not later than three months following the date of receipt of any application by a Governor of a State, either—

(A) find that such application does not contain the requisite showing and deny such application, or

(B) grant such application and take the action required under this subsection.

(6) Before taking any action required by subsection (f) or by this subsection, the Administrator shall provide notice and opportunity for public hearing.

(h) Design, equipment, work practice, or operational standard; alternative emission limitation

(1) For purposes of this section, if in the judgment of the Administrator, it is not feasible to prescribe or enforce a standard of performance, he may instead promulgate a design, equipment, work practice, or operational standard, or combination thereof, which reflects the best technological system of continuous emission reduction which (taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated. In the event the Administrator promulgates a design or equipment standard under this subsection, he shall include as part of such standard such requirements as will assure the proper operation and maintenance of any such element of design or equipment.

(2) For the purpose of this subsection, the phrase ''not feasible to prescribe or enforce a standard of performance'' means any situation in which the Administrator determines that (A) a pollutant or pollutants cannot be emitted through a conveyance designed and constructed to emit or capture such pollutant, or that any requirement for, or use of, such a conveyance would be inconsistent with any Federal, State, or local law, or (B) the application of measurement methodology to a particular class of sources is not practicable due to technological or economic limitations.

(3) If after notice and opportunity for public hearing, any person establishes to the satisfaction of the Administrator that an alternative means of emission limitation will achieve a reduction in emissions of any air pollutant at least equivalent to the reduction in emissions of such air pollutant achieved under the require-

ments of paragraph (1), the Administrator shall permit the use of such alternative by the source for purposes of compliance with this section with respect to such pollutant.

(4) Any standard promulgated under paragraph (1) shall be promulgated in terms of standard of performance whenever it becomes feasible to promulgate and enforce such standard in such terms.

(5) Any design, equipment, work practice, or operational standard, or any combination thereof, described in this subsection shall be treated as a standard of performance for purposes of the provisions of this chapter (other than the provisions of subsection (a) and this subsection).

(i) Country elevators

Any regulations promulgated by the Administrator under this section applicable to grain elevators shall not apply to country elevators (as defined by the Administrator) which have a storage capacity of less than two million five hundred thousand bushels.

(j) Innovative technological systems of continuous emission reduction

(1)(A) Any person proposing to own or operate a new source may request the Administrator for one or more waivers from the requirements of this section for such source or any portion thereof with respect to any air pollutant to encourage the use of an innovative technological system or systems of continuous emission reduction. The Administrator may, with the consent of the Governor of the State in which the source is to be located, grant a waiver under this paragraph, if the Administrator determines after notice and opportunity for public hearing, that—

(i) the proposed system or systems have not been adequately demonstrated,

(ii) the proposed system or systems will operate effectively and there is a substantial likelihood that such system or systems will achieve greater continuous emission reduction than that required to be achieved under the standards of performance which would otherwise apply, or achieve at least an equivalent reduction at lower cost in terms of energy, economic, or nonair quality environmental impact,

(iii) the owner or operator of the proposed source has demonstrated to the satisfaction of the Administrator that the proposed system will not cause or contribute to an unreasonable risk to public health, welfare, or safety in its operation, function, or malfunction, and

(iv) the granting of such waiver is consistent with the requirements of subparagraph (C).

In making any determination under clause (ii), the Administrator shall take into account any previous failure of such system or systems to operate effectively or to meet any requirement of the new source performance standards. In determining whether an unreasonable risk exists under clause (iii), the Administrator shall consider, among other factors, whether and to what extent the use of the proposed technological system will cause, increase, reduce, or eliminate emissions of any unregulated pollutants; available methods for reducing or eliminating any risk to public health, welfare, or safety which may be associated with the use of such system; and the availability of other technological systems which may be used to conform to standards under this section without causing or contributing to such unreasonable risk. The Administrator may conduct such tests and may require the owner or operator of the proposed source to conduct such tests and provide such information as is necessary to carry out clause (iii) of this subparagraph. Such requirements shall include a requirement for prompt reporting of the emission of any unregulated pollutant from a system if such pollutant was not emitted, or was emitted in significantly lesser amounts without use of such system.

(B) A waiver under this paragraph shall be granted on such terms and conditions as the Administrator determines to be necessary to assure—

(i) emissions from the source will not prevent attainment and maintenance of any national ambient air quality standards, and

(ii) proper functioning of the technological system or systems authorized.

Any such term or condition shall be treated as a standard of performance for the purposes of subsection (e) of this section and section 7413 of this title.

(C) The number of waivers granted under this paragraph with respect to a proposed technological system of continuous emission reduction shall not exceed such number as the Administrator finds necessary to ascertain whether or not such system will achieve the conditions specified in clauses (ii) and (iii) of subparagraph (A).

(D) A waiver under this paragraph shall extend to the sooner of—

(i) the date determined by the Administrator, after consultation with the owner or operator of the source, taking into consideration the design, installation, and capital cost of the technological system or systems being used, or

(ii) the date on which the Administrator determines that such system has failed to—

(I) achieve at least an equivalent continuous emission reduction to that required to be achieved under the standards of performance which would otherwise apply, or

(II) comply with the condition specified in paragraph (1)(A)(iii),

and that such failure cannot be corrected.

(E) In carrying out subparagraph (D)(i), the Administrator shall not permit any waiver for a source or portion thereof to extend beyond the date—

(i) seven years after the date on which any waiver is granted to such source or portion thereof, or

(ii) four years after the date on which such source or portion thereof commences operation,

whichever is earlier.

(F) No waiver under this subsection shall apply to any portion of a source other than the portion on which the innovative technological system or systems of continuous emission reduction is used.

(2)(A) If a waiver under paragraph (1) is terminated under clause (ii) of paragraph (1)(D), the Administrator shall grant an extension of the requirements of this section for such source for such minimum period as may be necessary to comply with the applicable standard of performance under this section. Such period shall not extend beyond the date three years from the time such waiver is terminated.

(B) An extension granted under this paragraph shall set forth emission limits and a compliance schedule containing increments of progress which require compliance with the applicable standards of performance as expeditiously as practicable and include such measures as are necessary and practicable in the interim to minimize emissions. Such schedule shall be treated as a standard of performance for purposes of subsection (e) of this section and section 7413 of this title.

(July 14, 1955, ch. 360, title I, § 111, as added Pub. L. 91–604, § 4(a), Dec. 31, 1970, 84 Stat. 1683; amended Pub. L. 92–157, title III, § 302(f), Nov. 18, 1971, 85 Stat. 464; Pub. L. 95–95, title I, § 109(a)–(d)(1), (e), (f), title IV, § 401(b), Aug. 7, 1977, 91 Stat. 697–703, 791; Pub. L. 95–190, § 14(a)(7)–(9), Nov. 16, 1977, 91 Stat. 1399; Pub. L. 95–623, § 13(a), Nov. 9, 1978, 92 Stat. 3457; Pub. L. 101–549, title I, § 108(e)–(g), title III, § 302(a), (b), title IV, § 403(a), Nov. 15, 1990, 104 Stat. 2467, 2574, 2631.)

Editorial Notes

References in Text

Such Act, referred to in subsec. (a)(8), means Pub. L. 93–319, June 22, 1974, 88 Stat. 246, as amended, known as the Energy Supply and Environmental Coordination Act of 1974, which is classified principally to chapter 16C (§ 791 et seq.) of Title 15, Commerce and Trade. For complete classification of this Act to the Code, see Short Title note set out under section 791 of Title 15 and Tables.

Section 7413 of this title, referred to in subsec. (a)(8), was amended generally by Pub. L. 101–549, title VII, § 701, Nov. 15, 1990, 104 Stat. 2672, and, as so amended, subsec. (d) of section 7413 no longer relates to final compliance orders.

Subsection (a)(1) of this section, referred to in subsec. (b)(6), was amended generally by Pub. L. 101–549, title VII, § 403(a), Nov. 15, 1990, 104 Stat. 2631, and, as so amended, no longer contains subpars.

Codification

Section was formerly classified to section 1857c–6 of this title.

Prior Provisions

A prior section 111 of act July 14, 1955, was renumbered section 118 by Pub. L. 91–604 and is classified to section 7418 of this title.

Amendments

1990—Subsec. (a)(1). Pub. L. 101–549, § 403(a), amended par. (1) generally, substituting provisions defining ''standard of performance'' with respect to any air pollutant for provisions defining such term with respect to subsec. (b) fossil fuel fired and other stationary sources and subsec. (d) particular sources.

Subsec. (a)(3). Pub. L. 101–549, § 108(f), inserted at end ''Nothing in subchapter II of this chapter relating to nonroad engines shall be construed to apply to stationary internal combustion engines.''

Subsec. (b)(1)(B). Pub. L. 101–549, § 108(e)(1), substituted ''Within one year'' for ''Within 120 days'', ''within one year'' for ''within 90 days'', and ''every 8 years'' for ''every four years'', inserted before last sentence ''Notwithstanding the requirements of the previous sentence, the Administrator need not review any such standard if the Administrator determines that such review is not appropriate in light of readily available information on the efficacy of such standard.'', and inserted at end ''When implementation and enforcement of any requirement of this chapter indicate that emission limitations and percent reductions beyond those required by the standards promulgated under this section are achieved in practice, the Administrator shall, when revising standards promulgated under this section, consider the emission limitations and percent reductions achieved in practice.''

Subsec. (d)(1)(A)(i). Pub. L. 101–549, § 302(a), which directed the substitution of ''7412(b)'' for ''7412(b)(1)(A)'', could not be executed, because of the prior amendment by Pub. L. 101–549, § 108(g), see below.

Pub. L. 101–549, § 108(g), substituted ''or emitted from a source category which is regulated under section 7412 of this title'' for ''or 7412(b)(1)(A)''.

Subsec. (f)(1). Pub. L. 101–549, § 108(e)(2), amended par. (1) generally, substituting present provisions for provisions requiring the Administrator to promulgate regulations listing the categories of major stationary sources not on the required list by Aug. 7, 1977, and regulations establishing standards of performance for such categories.

Subsec. (g)(5) to (8). Pub. L. 101–549, § 302(b), redesignated par. (7) as (5) and struck out ''or section 7412 of this title'' after ''this section'', redesignated par. (8) as (6), and struck out former pars. (5) and (6) which read as follows:

''(5) Upon application by the Governor of a State showing that the Administrator has failed to list any air pollutant which causes, or contributes to, air pollution which may reasonably be anticipated to result in an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness as a hazardous air pollutant under section 7412 of this title the Administrator shall revise the list of hazardous air pollutants under such section to include such pollutant.

''(6) Upon application by the Governor of a State showing that any category of stationary sources of a hazardous air pollutant listed under section 7412 of this title is not subject to emission standards under such section, the Administrator shall propose and promulgate such emission standards applicable to such category of sources.''

1978—Subsecs. (d)(1)(A)(ii), (g)(4)(B). Pub. L. 95–623, § 13(a)(2), substituted ''under this section'' for ''under subsection (b) of this section''.

Subsec. (h)(5). Pub. L. 95–623, § 13(a)(1), added par. (5).

Subsec. (j). Pub. L. 95–623, § 13(a)(3), substituted in pars. (1)(A) and (2)(A) ''standards under this section'' and ''under this section'' for ''standards under subsection (b) of this section'' and ''under subsection (b) of this section'', respectively.

1977—Subsec. (a)(1). Pub. L. 95–95, § 109(c)(1)(A), added subpars. (A), (B), and (C), substituted ''For the purpose of subparagraphs (A)(i) and (ii) and (B), a standard of performance shall reflect'' for ''a standard for emissions of air pollutants which reflects'', ''and the percentage reduction achievable'' for ''achievable'', and ''technological system of continuous emission reduction which (taking into consideration the cost of achieving such emission reduction, and any nonair quality health and environment impact and energy requirements)'' for ''system of emission reduction which (taking into account the cost of achieving such reduction)'' in existing provisions, and inserted provision that, for the purpose of subparagraph (1)(A)(ii), any cleaning of the fuel or reduction in the pollution characteristics of the fuel after extraction and prior to combustion may be credited, as determined under regulations promulgated by the Administrator, to a source which burns such fuel.

Subsec. (a)(7). Pub. L. 95–95, § 109(c)(1)(B), added par. (7) defining ''technological system of continuous emission reduction''.

23, and such planning processes shall take into account the requirements of this part.

(c) Joint planning

In the case of a nonattainment area that is included within more than one State, the affected States may jointly, through interstate compact or otherwise, undertake and implement all or part of the planning procedures described in this section.

(July 14, 1955, ch. 360, title I, § 174, as added Pub. L. 95–95, title I, § 129(b), Aug. 7, 1977, 91 Stat. 748; amended Pub. L. 101–549, title I, § 102(d), Nov. 15, 1990, 104 Stat. 2417.)

Editorial Notes

AMENDMENTS

1990—Pub. L. 101–549 amended section generally, substituting present provisions for provisions which related to: in subsec. (a), preparation of implementation plan by designated organization; and in subsec. (b), coordination of plan preparation.

§ 7505. Environmental Protection Agency grants

(a) Plan revision development costs

The Administrator shall make grants to any organization of local elected officials with transportation or air quality maintenance planning responsibilities recognized by the State under section 7504(a) of this title for payment of the reasonable costs of developing a plan revision under this part.

(b) Uses of grant funds

The amount granted to any organization under subsection (a) shall be 100 percent of any additional costs of developing a plan revision under this part for the first two fiscal years following receipt of the grant under this paragraph, and shall supplement any funds available under Federal law to such organization for transportation or air quality maintenance planning. Grants under this section shall not be used for construction.

(July 14, 1955, ch. 360, title I, § 175, as added Pub. L. 95–95, title I, § 129(b), Aug. 7, 1977, 91 Stat. 749.)

§ 7505a. Maintenance plans

(a) Plan revision

Each State which submits a request under section 7407(d) of this title for redesignation of a nonattainment area for any air pollutant as an area which has attained the national primary ambient air quality standard for that air pollutant shall also submit a revision of the applicable State implementation plan to provide for the maintenance of the national primary ambient air quality standard for such air pollutant in the area concerned for at least 10 years after the redesignation. The plan shall contain such additional measures, if any, as may be necessary to ensure such maintenance.

(b) Subsequent plan revisions

8 years after redesignation of any area as an attainment area under section 7407(d) of this title, the State shall submit to the Administrator an additional revision of the applicable State implementation plan for maintaining the national primary ambient air quality standard for 10 years after the expiration of the 10-year period referred to in subsection (a).

(c) Nonattainment requirements applicable pending plan approval

Until such plan revision is approved and an area is redesignated as attainment for any area designated as a nonattainment area, the requirements of this part shall continue in force and effect with respect to such area.

(d) Contingency provisions

Each plan revision submitted under this section shall contain such contingency provisions as the Administrator deems necessary to assure that the State will promptly correct any violation of the standard which occurs after the redesignation of the area as an attainment area. Such provisions shall include a requirement that the State will implement all measures with respect to the control of the air pollutant concerned which were contained in the State implementation plan for the area before redesignation of the area as an attainment area. The failure of any area redesignated as an attainment area to maintain the national ambient air quality standard concerned shall not result in a requirement that the State revise its State implementation plan unless the Administrator, in the Administrator's discretion, requires the State to submit a revised State implementation plan.

(July 14, 1955, ch. 360, title I, § 175A, as added Pub. L. 101–549, title I, § 102(e), Nov. 15, 1990, 104 Stat. 2418.)

§ 7506. Limitations on certain Federal assistance

(a), (b) Repealed. Pub. L. 101–549, title I, § 110(4), Nov. 15, 1990, 104 Stat. 2470

(c) Activities not conforming to approved or promulgated plans

(1) No department, agency, or instrumentality of the Federal Government shall engage in, support in any way or provide financial assistance for, license or permit, or approve, any activity which does not conform to an implementation plan after it has been approved or promulgated under section 7410 of this title. No metropolitan planning organization designated under section 134 of title 23, shall give its approval to any project, program, or plan which does not conform to an implementation plan approved or promulgated under section 7410 of this title. The assurance of conformity to such an implementation plan shall be an affirmative responsibility of the head of such department, agency, or instrumentality. Conformity to an implementation plan means—

(A) conformity to an implementation plan's purpose of eliminating or reducing the severity and number of violations of the national ambient air quality standards and achieving expeditious attainment of such standards; and

(B) that such activities will not—

(i) cause or contribute to any new violation of any standard in any area;

(ii) increase the frequency or severity of any existing violation of any standard in any area; or

(iii) delay timely attainment of any standard or any required interim emission reductions or other milestones in any area.

The determination of conformity shall be based on the most recent estimates of emissions, and such estimates shall be determined from the most recent population, employment, travel and congestion estimates as determined by the metropolitan planning organization or other agency authorized to make such estimates.

(2) Any transportation plan or program developed pursuant to title 23 or chapter 53 of title 49 shall implement the transportation provisions of any applicable implementation plan approved under this chapter applicable to all or part of the area covered by such transportation plan or program. No Federal agency may approve, accept or fund any transportation plan, program or project unless such plan, program or project has been found to conform to any applicable implementation plan in effect under this chapter. In particular—

(A) no transportation plan or transportation improvement program may be adopted by a metropolitan planning organization designated under title 23 or chapter 53 of title 49, or be found to be in conformity by a metropolitan planning organization until a final determination has been made that emissions expected from implementation of such plans and programs are consistent with estimates of emissions from motor vehicles and necessary emissions reductions contained in the applicable implementation plan, and that the plan or program will conform to the requirements of paragraph (1)(B);

(B) no metropolitan planning organization or other recipient of funds under title 23 or chapter 53 of title 49 shall adopt or approve a transportation improvement program of projects until it determines that such program provides for timely implementation of transportation control measures consistent with schedules included in the applicable implementation plan;

(C) a transportation project may be adopted or approved by a metropolitan planning organization or any recipient of funds designated under title 23 or chapter 53 of title 49, or found in conformity by a metropolitan planning organization or approved, accepted, or funded by the Department of Transportation only if it meets either the requirements of subparagraph (D) or the following requirements—

(i) such a project comes from a conforming plan and program;

(ii) the design concept and scope of such project have not changed significantly since the conformity finding regarding the plan and program from which the project derived; and

(iii) the design concept and scope of such project at the time of the conformity determination for the program was adequate to determine emissions.

(D) Any project not referred to in subparagraph (C) shall be treated as conforming to the applicable implementation plan only if it is demonstrated that the projected emissions from such project, when considered together with emissions projected for the conforming transportation plans and programs within the nonattainment area, do not cause such plans and programs to exceed the emission reduction projections and schedules assigned to such plans and programs in the applicable implementation plan.

(E) The appropriate metropolitan planning organization shall redetermine conformity of existing transportation plans and programs not later than 2 years after the date on which the Administrator—

(i) finds a motor vehicle emissions budget to be adequate in accordance with section 93.118(e)(4) of title 40, Code of Federal Regulations (as in effect on October 1, 2004);

(ii) approves an implementation plan that establishes a motor vehicle emissions budget if that budget has not yet been determined to be adequate in accordance with clause (i); or

(iii) promulgates an implementation plan that establishes or revises a motor vehicle emissions budget.

(3) Until such time as the implementation plan revision referred to in paragraph (4)(C)[1] is approved, conformity of such plans, programs, and projects will be demonstrated if—

(A) the transportation plans and programs—

(i) are consistent with the most recent estimates of mobile source emissions;

(ii) provide for the expeditious implementation of transportation control measures in the applicable implementation plan; and

(iii) with respect to ozone and carbon monoxide nonattainment areas, contribute to annual emissions reductions consistent with sections 7511a(b)(1) and 7512a(a)(7) of this title; and

(B) the transportation projects—

(i) come from a conforming transportation plan and program as defined in subparagraph (A) or for 12 months after November 15, 1990, from a transportation program found to conform within 3 years prior to November 15, 1990; and

(ii) in carbon monoxide nonattainment areas, eliminate or reduce the severity and number of violations of the carbon monoxide standards in the area substantially affected by the project.

With regard to subparagraph (B)(ii), such determination may be made as part of either the conformity determination for the transportation program or for the individual project taken as a whole during the environmental review phase of project development.

(4) CRITERIA AND PROCEDURES FOR DETERMINING CONFORMITY.—

(A) IN GENERAL.—The Administrator shall promulgate, and periodically update, criteria and procedures for determining conformity (except in the case of transportation plans, programs, and projects) of, and for keeping the Administrator informed about, the activities referred to in paragraph (1).

(B) TRANSPORTATION PLANS, PROGRAMS, AND PROJECTS.—The Administrator, with the concurrence of the Secretary of Transportation, shall promulgate, and periodically update, criteria and procedures for demonstrating and as-

[1] See References in Text note below.

suring conformity in the case of transportation plans, programs, and projects.

(C) CIVIL ACTION TO COMPEL PROMULGATION.—A civil action may be brought against the Administrator and the Secretary of Transportation under section 7604 of this title to compel promulgation of such criteria and procedures and the Federal district court shall have jurisdiction to order such promulgation.

(D) The procedures and criteria shall, at a minimum—

(i) address the consultation procedures to be undertaken by metropolitan planning organizations and the Secretary of Transportation with State and local air quality agencies and State departments of transportation before such organizations and the Secretary make conformity determinations;

(ii) address the appropriate frequency for making conformity determinations, but the frequency for making conformity determinations on updated transportation plans and programs shall be every 4 years, except in a case in which—

(I) the metropolitan planning organization elects to update a transportation plan or program more frequently; or

(II) the metropolitan planning organization is required to determine conformity in accordance with paragraph (2)(E); and

(iii) address how conformity determinations will be made with respect to maintenance plans.

(E) INCLUSION OF CRITERIA AND PROCEDURES IN SIP.—Not later than 2 years after August 10, 2005, the procedures under subparagraph (A) shall include a requirement that each State include in the State implementation plan criteria and procedures for consultation required by subparagraph (D)(i), and enforcement and enforceability (pursuant to sections 93.125(c) and 93.122(a)(4)(ii) of title 40, Code of Federal Regulations) in accordance with the Administrator's criteria and procedures for consultation, enforcement and enforceability.

(F) Compliance with the rules of the Administrator for determining the conformity of transportation plans, programs, and projects funded or approved under title 23 or chapter 53 of title 49 to State or Federal implementation plans shall not be required for traffic signal synchronization projects prior to the funding, approval or implementation of such projects. The supporting regional emissions analysis for any conformity determination made with respect to a transportation plan, program, or project shall consider the effect on emissions of any such project funded, approved, or implemented prior to the conformity determination.

(5) APPLICABILITY.—This subsection shall apply only with respect to—

(A) a nonattainment area and each pollutant for which the area is designated as a nonattainment area; and

(B) an area that was designated as a nonattainment area but that was later redesignated by the Administrator as an attainment area and that is required to develop a maintenance plan under section 7505a of this title with respect to the specific pollutant for which the area was designated nonattainment.

(6) Notwithstanding paragraph 5,[2] this subsection shall not apply with respect to an area designated nonattainment under section 7407(d)(1) of this title until 1 year after that area is first designated nonattainment for a specific national ambient air quality standard. This paragraph only applies with respect to the national ambient air quality standard for which an area is newly designated nonattainment and does not affect the area's requirements with respect to all other national ambient air quality standards for which the area is designated nonattainment or has been redesignated from nonattainment to attainment with a maintenance plan pursuant to section 7505a[1] of this title (including any pre-existing national ambient air quality standard for a pollutant for which a new or revised standard has been issued).

(7) CONFORMITY HORIZON FOR TRANSPORTATION PLANS.—

(A) IN GENERAL.—Each conformity determination required under this section for a transportation plan under section 134(i) of title 23 or section 5303(i) of title 49 shall require a demonstration of conformity for the period ending on either the final year of the transportation plan, or at the election of the metropolitan planning organization, after consultation with the air pollution control agency and solicitation of public comments and consideration of such comments, the longest of the following periods:

(i) The first 10-year period of any such transportation plan.

(ii) The latest year in the implementation plan applicable to the area that contains a motor vehicle emission budget.

(iii) The year after the completion date of a regionally significant project if the project is included in the transportation improvement program or the project requires approval before the subsequent conformity determination.

(B) REGIONAL EMISSIONS ANALYSIS.—The conformity determination shall be accompanied by a regional emissions analysis for the last year of the transportation plan and for any year shown to exceed emission budgets by a prior analysis, if such year extends beyond the applicable period as determined under subparagraph (A).

(C) EXCEPTION.—In any case in which an area has a revision to an implementation plan under section 7505a(b) of this title and the Administrator has found the motor vehicles emissions budgets from that revision to be adequate in accordance with section 93.118(e)(4) of title 40, Code of Federal Regulations (as in effect on October 1, 2004), or has approved the revision, the demonstration of conformity at the election of the metropolitan planning organization, after consultation with the air pollution control agency and solicitation of public comments and consideration of such comments, shall be required to extend only through the last year of the implementa-

[2] So in original. Probably should be ''paragraph (5),''.

tion plan required under section 7505a(b) of this title.

(D) EFFECT OF ELECTION.—Any election by a metropolitan planning organization under this paragraph shall continue in effect until the metropolitan planning organization elects otherwise.

(E) AIR POLLUTION CONTROL AGENCY DEFINED.—In this paragraph, the term ''air pollution control agency'' means an air pollution control agency (as defined in section 7602(b) of this title) that is responsible for developing plans or controlling air pollution within the area covered by a transportation plan.

(8) SUBSTITUTION OF TRANSPORTATION CONTROL MEASURES.—

(A) IN GENERAL.—Transportation control measures that are specified in an implementation plan may be replaced or added to the implementation plan with alternate or additional transportation control measures—

(i) if the substitute measures achieve equivalent or greater emissions reductions than the control measure to be replaced, as demonstrated with an emissions impact analysis that is consistent with the current methodology used for evaluating the replaced control measure in the implementation plan;

(ii) if the substitute control measures are implemented—

(I) in accordance with a schedule that is consistent with the schedule provided for control measures in the implementation plan; or

(II) if the implementation plan date for implementation of the control measure to be replaced has passed, as soon as practicable after the implementation plan date but not later than the date on which emission reductions are necessary to achieve the purpose of the implementation plan;

(iii) if the substitute and additional control measures are accompanied with evidence of adequate personnel and funding and authority under State or local law to implement, monitor, and enforce the control measures;

(iv) if the substitute and additional control measures were developed through a collaborative process that included—

(I) participation by representatives of all affected jurisdictions (including local air pollution control agencies, the State air pollution control agency, and State and local transportation agencies);

(II) consultation with the Administrator; and

(III) reasonable public notice and opportunity for comment; and

(v) if the metropolitan planning organization, State air pollution control agency, and the Administrator concur with the equivalency of the substitute or additional control measures.

(B) ADOPTION.—(i) Concurrence by the metropolitan planning organization, State air pollution control agency and the Administrator as required by subparagraph (A)(v) shall constitute adoption of the substitute or additional control measures so long as the requirements of subparagraphs (A)(i), (A)(ii), (A)(iii) and (A)(iv) are met.

(ii) Once adopted, the substitute or additional control measures become, by operation of law, part of the State implementation plan and become federally enforceable.

(iii) Within 90 days of its concurrence under subparagraph (A)(v), the State air pollution control agency shall submit the substitute or additional control measure to the Administrator for incorporation in the codification of the applicable implementation plan. Nothwithstanding[3] any other provision of this chapter, no additional State process shall be necessary to support such revision to the applicable plan.

(C) NO REQUIREMENT FOR EXPRESS PERMISSION.—The substitution or addition of a transportation control measure in accordance with this paragraph and the funding or approval of such a control measure shall not be contingent on the existence of any provision in the applicable implementation plan that expressly permits such a substitution or addition.

(D) NO REQUIREMENT FOR NEW CONFORMITY DETERMINATION.—The substitution or addition of a transportation control measure in accordance with this paragraph shall not require—

(i) a new conformity determination for the transportation plan; or

(ii) a revision of the implementation plan.

(E) CONTINUATION OF CONTROL MEASURE BEING REPLACED.—A control measure that is being replaced by a substitute control measure under this paragraph shall remain in effect until the substitute control measure is adopted by the State pursuant to subparagraph (B).

(F) EFFECT OF ADOPTION.—Adoption of a substitute control measure shall constitute rescission of the previously applicable control measure.

(9) LAPSE OF CONFORMITY.—If a conformity determination required under this subsection for a transportation plan under section 134(i) of title 23 or section 5303(i) of title 49 or a transportation improvement program under section 134(j) of such title 23 or under section 5303(j) of such title 49 is not made by the applicable deadline and such failure is not corrected by additional measures to either reduce motor vehicle emissions sufficient to demonstrate compliance with the requirements of this subsection within 12 months after such deadline or other measures sufficient to correct such failures, the transportation plan shall lapse.

(10) LAPSE.—In this subsection, the term ''lapse'' means that the conformity determination for a transportation plan or transportation improvement program has expired, and thus there is no currently conforming transportation plan or transportation improvement program.

(d) Priority of achieving and maintaining national primary ambient air quality standards

Each department, agency, or instrumentality of the Federal Government having authority to

[3] So in original. Probably should be ''Notwithstanding''.

conduct or support any program with air-quality related transportation consequences shall give priority in the exercise of such authority, consistent with statutory requirements for allocation among States or other jurisdictions, to the implementation of those portions of plans prepared under this section to achieve and maintain the national primary ambient air-quality standard. This paragraph extends to, but is not limited to, authority exercised under chapter 53 of title 49, title 23, and the Housing and Urban Development Act.

(July 14, 1955, ch. 360, title I, § 176, as added Pub. L. 95–95, title I, § 129(b), Aug. 7, 1977, 91 Stat. 749; amended Pub. L. 95–190, § 14(a)(59), Nov. 16, 1977, 91 Stat. 1403; Pub. L. 101–549, title I, §§ 101(f), 110(4), Nov. 15, 1990, 104 Stat. 2409, 2470; Pub. L. 104–59, title III, § 305(b), Nov. 28, 1995, 109 Stat. 580; Pub. L. 104–260, § 1, Oct. 9, 1996, 110 Stat. 3175; Pub. L. 106–377, § 1(a)(1) [title III], Oct. 27, 2000, 114 Stat. 1441, 1441A–44; Pub. L. 109–59, title VI, § 6011(a)–(f), Aug. 10, 2005, 119 Stat. 1878–1881.)

Editorial Notes

REFERENCES IN TEXT

Paragraph (4) of subsec. (c), referred to in subsec. (c)(3), was amended by Pub. L. 109–59, title VI, § 6011(f), Aug. 10, 2005, 119 Stat. 1881, to redesignate subpar. (C) as (E), strike it out, and add new subpars. (C) and (E). See 2005 Amendment notes below.

Section 7505a of this title, referred to in subsec. (c)(6), was in the original ''section 175(A)'' and was translated as reading ''section 175A'', meaning section 175A of act July 14, 1955, which is classified to section 7505a of this title, to reflect the probable intent of Congress.

The Housing and Urban Development Act, referred to in subsec. (d), may be the name for a series of acts sharing the same name but enacted in different years by Pub. L. 89–117, Aug. 10, 1965, 79 Stat. 451; Pub. L. 90–448, Aug. 1, 1968, 82 Stat. 476; Pub. L. 91–152, Dec. 24, 1969, 83 Stat. 379; and Pub. L. 91–609, Dec. 31, 1970, 84 Stat. 1770, respectively. For complete classification of these Acts to the Code, see Short Title notes set out under section 1701 of Title 12, Banks and Banking, and Tables.

CODIFICATION

In subsecs. (c)(2) and (d), ''chapter 53 of title 49'' substituted for ''the Urban Mass Transportation Act [49 App. U.S.C. 1601 et seq.]'' and in subsec. (c)(4)(F) substituted for ''Federal Transit Act'' on authority of Pub. L. 103–272, § 6(b), July 5, 1994, 108 Stat. 1378 (the first section of which enacted subtitles II, III, and V to X of Title 49, Transportation), and of Pub. L. 102–240, title III, § 3003(b), Dec. 18, 1991, 105 Stat. 2088, which provided that references in laws to the Urban Mass Transportation Act of 1964 be deemed to be references to the Federal Transit Act.

AMENDMENTS

2005—Subsec. (c)(2)(E). Pub. L. 109–59, § 6011(a), added subpar. (E).

Subsec. (c)(4). Pub. L. 109–59, § 6011(f)(1)–(3), inserted par. (4) and subpar. (A) headings, in first sentence substituted ''The Administrator shall promulgate, and periodically update,'' for ''No later than one year after November 15, 1990, the Administrator shall promulgate'', designated second sentence as subpar. (B), inserted heading, substituted ''The Administrator, with the concurrence of the Secretary of Transportation, shall promulgate, and periodically update,'' for ''No later than one year after November 15, 1990, the Administrator, with the concurrence of the Secretary of Transportation, shall promulgate'', designated third sentence as subpar. (C), inserted heading, substituted ''A civil action'' for ''A suit'', and redesignated former subpars. (B) to (D) as (D) to (F), respectively.

Subsec. (c)(4)(B)(ii). Pub. L. 109–59, § 6011(b), amended cl. (ii) generally. Prior to amendment, cl. (ii) read as follows: ''address the appropriate frequency for making conformity determinations, but in no case shall such determinations for transportation plans and programs be less frequent than every three years; and''.

Subsec. (c)(4)(E). Pub. L. 109–59, § 6011(f)(4), added subpar. (E) and struck out former subpar. (E) which read as follows: ''Such procedures shall also include a requirement that each State shall submit to the Administrator and the Secretary of Transportation within 24 months of November 15, 1990, a revision to its implementation plan that includes criteria and procedures for assessing the conformity of any plan, program, or project subject to the conformity requirements of this subsection.''

Subsec. (c)(7) to (10). Pub. L. 109–59, § 6011(c)–(e), added pars. (7) to (10).

2000—Subsec. (c)(6). Pub. L. 106–377 added par. (6).

1996—Subsec. (c)(4)(D). Pub. L. 104–260 added subpar. (D).

1995—Subsec. (c)(5). Pub. L. 104–59 added par. (5).

1990—Subsecs. (a), (b). Pub. L. 101–549, § 110(4), struck out subsec. (a) which related to approval of projects or award of grants, and subsec. (b) which related to implementation of approved or promulgated plans.

Subsec. (c). Pub. L. 101–549, § 101(f), designated existing provisions as par. (1), struck out ''(1)'', ''(2)'', ''(3)'', and ''(4)'' before ''engage in'', ''support in'', ''license or'', and ''approve, any'', respectively, substituted ''conform to an implementation plan after it'' for ''conform to a plan after it'', ''conform to an implementation plan approved'' for ''conform to a plan approved'', and ''conformity to such an implementation plan shall'' for ''conformity to such a plan shall'', inserted ''Conformity to an implementation plan means—'' followed immediately by subpars. (A) and (B) and closing provisions relating to determination of conformity being based on recent estimates of emissions and the determination of such estimates, and added pars. (2) to (4).

1977—Subsec. (a)(1). Pub. L. 95–190 inserted ''national'' before ''primary''.

Statutory Notes and Related Subsidiaries

REGULATIONS

Pub. L. 109–59, title VI, § 6011(g), Aug. 10, 2005, 119 Stat. 1882, provided that: ''Not later than 2 years after the date of enactment of this Act [Aug. 10, 2005], the Administrator of the Environmental Protection Agency shall promulgate revised regulations to implement the changes made by this section [amending this section].''

§ 7506a. Interstate transport commissions

(a) Authority to establish interstate transport regions

Whenever, on the Administrator's own motion or by petition from the Governor of any State, the Administrator has reason to believe that the interstate transport of air pollutants from one or more States contributes significantly to a violation of a national ambient air quality standard in one or more other States, the Administrator may establish, by rule, a transport region for such pollutant that includes such States. The Administrator, on the Administrator's own motion or upon petition from the Governor of any State, or upon the recommendation of a transport commission established under subsection (b), may—

(1) add any State or portion of a State to any region established under this subsection whenever the Administrator has reason to believe that the interstate transport of air pol-

Editorial Notes

CODIFICATION

Section was formerly classified to section 1857f–6b of this title.

PRIOR PROVISIONS

A prior section 210 of act July 14, 1955, was renumbered section 211 by Pub. L. 91–604 and is classified to section 7545 of this title.

AMENDMENTS

1977—Pub. L. 95–95 inserted provision allowing grants to be made by way of reimbursement in any case in which amounts have been expended by States before the date on which the grants were made.

1970—Pub. L. 91–604, §10(b), substituted provisions authorizing the Administrator to make grants to appropriate State agencies for the development and maintenance of effective vehicle emission devices and systems inspection and emission testing and control programs, for provisions authorizing the Secretary to make grants to appropriate State air pollution control agencies for the development of meaningful uniform motor vehicle emission device inspection and emission testing programs.

Statutory Notes and Related Subsidiaries

EFFECTIVE DATE OF 1977 AMENDMENT

Amendment by Pub. L. 95–95 effective Aug. 7, 1977, except as otherwise expressly provided, see section 406(d) of Pub. L. 95–95, set out as a note under section 7401 of this title.

§ 7545. Regulation of fuels

(a) Authority of Administrator to regulate

The Administrator may by regulation designate any fuel or fuel additive (including any fuel or fuel additive used exclusively in nonroad engines or nonroad vehicles) and, after such date or dates as may be prescribed by him, no manufacturer or processor of any such fuel or additive may sell, offer for sale, or introduce into commerce such fuel or additive unless the Administrator has registered such fuel or additive in accordance with subsection (b) of this section.

(b) Registration requirement

(1) For the purpose of registration of fuels and fuel additives, the Administrator shall require—

(A) the manufacturer of any fuel to notify him as to the commercial identifying name and manufacturer of any additive contained in such fuel; the range of concentration of any additive in the fuel; and the purpose-in-use of any such additive; and

(B) the manufacturer of any additive to notify him as to the chemical composition of such additive.

(2) For the purpose of registration of fuels and fuel additives, the Administrator shall, on a regular basis, require the manufacturer of any fuel or fuel additive—

(A) to conduct tests to determine potential public health and environmental effects of the fuel or additive (including carcinogenic, teratogenic, or mutagenic effects); and

(B) to furnish the description of any analytical technique that can be used to detect and measure any additive in such fuel, the recommended range of concentration of such additive, and the recommended purpose-in-use of such additive, and such other information as is reasonable and necessary to determine the emissions resulting from the use of the fuel or additive contained in such fuel, the effect of such fuel or additive on the emission control performance of any vehicle, vehicle engine, nonroad engine or nonroad vehicle, or the extent to which such emissions affect the public health or welfare.

Tests under subparagraph (A) shall be conducted in conformity with test procedures and protocols established by the Administrator. The result of such tests shall not be considered confidential.

(3) Upon compliance with the provision of this subsection, including assurances that the Administrator will receive changes in the information required, the Administrator shall register such fuel or fuel additive.

(4) STUDY ON CERTAIN FUEL ADDITIVES AND BLENDSTOCKS.—

(A) IN GENERAL.—Not later than 2 years after August 8, 2005, the Administrator shall—

(i) conduct a study on the effects on public health (including the effects on children, pregnant women, minority or low-income communities, and other sensitive populations), air quality, and water resources of increased use of, and the feasibility of using as substitutes for methyl tertiary butyl ether in gasoline—

(I) ethyl tertiary butyl ether;
(II) tertiary amyl methyl ether;
(III) di-isopropyl ether;
(IV) tertiary butyl alcohol;
(V) other ethers and heavy alcohols, as determined by then[1] Administrator;
(VI) ethanol;
(VII) iso-octane; and
(VIII) alkylates; and

(ii) conduct a study on the effects on public health (including the effects on children, pregnant women, minority or low-income communities, and other sensitive populations), air quality, and water resources of the adjustment for ethanol-blended reformulated gasoline to the volatile organic compounds performance requirements that are applicable under paragraphs (1) and (3) of subsection (k); and

(iii) submit to the Committee on Environment and Public Works of the Senate and the Committee on Energy and Commerce of the House of Representatives a report describing the results of the studies under clauses (i) and (ii).

(B) CONTRACTS FOR STUDY.—In carrying out this paragraph, the Administrator may enter into one or more contracts with nongovernmental entities such as—

(i) the national energy laboratories; and
(ii) institutions of higher education (as defined in section 1001 of title 20).

(c) Offending fuels and fuel additives; control; prohibition

(1) The Administrator may, from time to time on the basis of information obtained under sub-

[1] So in original. Probably should be ''the''.

section (b) of this section or other information available to him, by regulation, control or prohibit the manufacture, introduction into commerce, offering for sale, or sale of any fuel or fuel additive for use in a motor vehicle, motor vehicle engine, or nonroad engine or nonroad vehicle if, in the judgment of the Administrator, any fuel or fuel additive or any emission product of such fuel or fuel additive causes, or contributes, to air pollution or water pollution (including any degradation in the quality of groundwater) that may reasonably be anticipated to endanger the public health or welfare, or (B)[2] if emission products of such fuel or fuel additive will impair to a significant degree the performance of any emission control device or system which is in general use, or which the Administrator finds has been developed to a point where in a reasonable time it would be in general use were such regulation to be promulgated.

(2)(A) No fuel, class of fuels, or fuel additive may be controlled or prohibited by the Administrator pursuant to clause (A) of paragraph (1) except after consideration of all relevant medical and scientific evidence available to him, including consideration of other technologically or economically feasible means of achieving emission standards under section 7521 of this title.

(B) No fuel or fuel additive may be controlled or prohibited by the Administrator pursuant to clause (B) of paragraph (1) except after consideration of available scientific and economic data, including a cost benefit analysis comparing emission control devices or systems which are or will be in general use and require the proposed control or prohibition with emission control devices or systems which are or will be in general use and do not require the proposed control or prohibition. On request of a manufacturer of motor vehicles, motor vehicle engines, fuels, or fuel additives submitted within 10 days of notice of proposed rulemaking, the Administrator shall hold a public hearing and publish findings with respect to any matter he is required to consider under this subparagraph. Such findings shall be published at the time of promulgation of final regulations.

(C) No fuel or fuel additive may be prohibited by the Administrator under paragraph (1) unless he finds, and publishes such finding, that in his judgment such prohibition will not cause the use of any other fuel or fuel additive which will produce emissions which will endanger the public health or welfare to the same or greater degree than the use of the fuel or fuel additive proposed to be prohibited.

(3)(A) For the purpose of obtaining evidence and data to carry out paragraph (2), the Administrator may require the manufacturer of any motor vehicle or motor vehicle engine to furnish any information which has been developed concerning the emissions from motor vehicles resulting from the use of any fuel or fuel additive, or the effect of such use on the performance of any emission control device or system.

(B) In obtaining information under subparagraph (A), section 7607(a) of this title (relating to subpenas) shall be applicable.

(4)(A) Except as otherwise provided in subparagraph (B) or (C), no State (or political subdivision thereof) may prescribe or attempt to enforce, for purposes of motor vehicle emission control, any control or prohibition respecting any characteristic or component of a fuel or fuel additive in a motor vehicle or motor vehicle engine—

(i) if the Administrator has found that no control or prohibition of the characteristic or component of a fuel or fuel additive under paragraph (1) is necessary and has published his finding in the Federal Register, or

(ii) if the Administrator has prescribed under paragraph (1) a control or prohibition applicable to such characteristic or component of a fuel or fuel additive, unless State prohibition or control is identical to the prohibition or control prescribed by the Administrator.

(B) Any State for which application of section 7543(a) of this title has at any time been waived under section 7543(b) of this title may at any time prescribe and enforce, for the purpose of motor vehicle emission control, a control or prohibition respecting any fuel or fuel additive.

(C)(i) A State may prescribe and enforce, for purposes of motor vehicle emission control, a control or prohibition respecting the use of a fuel or fuel additive in a motor vehicle or motor vehicle engine if an applicable implementation plan for such State under section 7410 of this title so provides. The Administrator may approve such provision in an implementation plan, or promulgate an implementation plan containing such a provision, only if he finds that the State control or prohibition is necessary to achieve the national primary or secondary ambient air quality standard which the plan implements. The Administrator may find that a State control or prohibition is necessary to achieve that standard if no other measures that would bring about timely attainment exist, or if other measures exist and are technically possible to implement, but are unreasonable or impracticable. The Administrator may make a finding of necessity under this subparagraph even if the plan for the area does not contain an approved demonstration of timely attainment.

(ii) The Administrator may temporarily waive a control or prohibition respecting the use of a fuel or fuel additive required or regulated by the Administrator pursuant to subsection (c), (h), (i), (k), or (m) of this section or prescribed in an applicable implementation plan under section 7410 of this title approved by the Administrator under clause (i) of this subparagraph if, after consultation with, and concurrence by, the Secretary of Energy, the Administrator determines that—

(I) extreme and unusual fuel or fuel additive supply circumstances exist in a State or region of the Nation which prevent the distribution of an adequate supply of the fuel or fuel additive to consumers;

(II) such extreme and unusual fuel and fuel additive supply circumstances are the result of a natural disaster, an Act of God, a pipeline or refinery equipment failure, or another event that could not reasonably have been foreseen or prevented and not the lack of prudent planning on the part of the suppliers of the fuel or fuel additive to such State or region; and

[2] So in original. Par. (1) does not contain a cl. (A).

(III) it is in the public interest to grant the waiver (for example, when a waiver is necessary to meet projected temporary shortfalls in the supply of the fuel or fuel additive in a State or region of the Nation which cannot otherwise be compensated for).

(iii) If the Administrator makes the determinations required under clause (ii), such a temporary extreme and unusual fuel and fuel additive supply circumstances waiver shall be permitted only if—

(I) the waiver applies to the smallest geographic area necessary to address the extreme and unusual fuel and fuel additive supply circumstances;

(II) the waiver is effective for a period of 20 calendar days or, if the Administrator determines that a shorter waiver period is adequate, for the shortest practicable time period necessary to permit the correction of the extreme and unusual fuel and fuel additive supply circumstances and to mitigate impact on air quality;

(III) the waiver permits a transitional period, the exact duration of which shall be determined by the Administrator (but which shall be for the shortest practicable period), after the termination of the temporary waiver to permit wholesalers and retailers to blend down their wholesale and retail inventory;

(IV) the waiver applies to all persons in the motor fuel distribution system; and

(V) the Administrator has given public notice to all parties in the motor fuel distribution system, and local and State regulators, in the State or region to be covered by the waiver.

The term ''motor fuel distribution system'' as used in this clause shall be defined by the Administrator through rulemaking.

(iv) Within 180 days of August 8, 2005, the Administrator shall promulgate regulations to implement clauses (ii) and (iii).

(v)[3] Nothing in this subparagraph shall—

(I) limit or otherwise affect the application of any other waiver authority of the Administrator pursuant to this section or pursuant to a regulation promulgated pursuant to this section; and

(II) subject any State or person to an enforcement action, penalties, or liability solely arising from actions taken pursuant to the issuance of a waiver under this subparagraph.

(v)(I)[3] The Administrator shall have no authority, when considering a State implementation plan or a State implementation plan revision, to approve under this paragraph any fuel included in such plan or revision if the effect of such approval increases the total number of fuels approved under this paragraph as of September 1, 2004, in all State implementation plans.

(II) The Administrator, in consultation with the Secretary of Energy, shall determine the total number of fuels approved under this paragraph as of September 1, 2004, in all State implementation plans and shall publish a list of such fuels, including the States and Petroleum Administration for Defense District in which they are used, in the Federal Register for public review and comment no later than 90 days after August 8, 2005.

(III) The Administrator shall remove a fuel from the list published under subclause (II) if a fuel ceases to be included in a State implementation plan or if a fuel in a State implementation plan is identical to a Federal fuel formulation implemented by the Administrator, but the Administrator shall not reduce the total number of fuels authorized under the list published under subclause (II).

(IV) Subclause (I) shall not limit the Administrator's authority to approve a control or prohibition respecting any new fuel under this paragraph in a State implementation plan or revision to a State implementation plan if such new fuel—

(aa) completely replaces a fuel on the list published under subclause (II); or

(bb) does not increase the total number of fuels on the list published under subclause (II) as of September 1, 2004.

In the event that the total number of fuels on the list published under subclause (II) at the time of the Administrator's consideration of a control or prohibition respecting a new fuel is lower than the total number of fuels on such list as of September 1, 2004, the Administrator may approve a control or prohibition respecting a new fuel under this subclause if the Administrator, after consultation with the Secretary of Energy, publishes in the Federal Register after notice and comment a finding that, in the Administrator's judgment, such control or prohibition respecting a new fuel will not cause fuel supply or distribution interruptions or have a significant adverse impact on fuel producibility in the affected area or contiguous areas.

(V) The Administrator shall have no authority under this paragraph, when considering any particular State's implementation plan or a revision to that State's implementation plan, to approve any fuel unless that fuel was, as of the date of such consideration, approved in at least one State implementation plan in the applicable Petroleum Administration for Defense District. However, the Administrator may approve as part of a State implementation plan or State implementation plan revision a fuel with a summertime Reid Vapor Pressure of 7.0 psi. In no event shall such approval by the Administrator cause an increase in the total number of fuels on the list published under subclause (II).

(VI) Nothing in this clause shall be construed to have any effect regarding any available authority of States to require the use of any fuel additive registered in accordance with subsection (b), including any fuel additive registered in accordance with subsection (b) after August 8, 2005.

(d) Penalties and injunctions

(1) Civil penalties

Any person who violates subsection (a), (f), (g), (k), (*l*), (m), (n), or (*o*) of this section or the regulations prescribed under subsection (c), (h), (i), (k), (*l*), (m), (n), or (*o*) of this section or who fails to furnish any information or conduct any tests required by the Administrator

[3] So in original. Two cls. (v) have been enacted.

under subsection (b) of this section shall be liable to the United States for a civil penalty of not more than the sum of $25,000 for every day of such violation and the amount of economic benefit or savings resulting from the violation. Any violation with respect to a regulation prescribed under subsection (c), (k), (*l*), (m), or (*o*) of this section which establishes a regulatory standard based upon a multiday averaging period shall constitute a separate day of violation for each and every day in the averaging period. Civil penalties shall be assessed in accordance with subsections (b) and (c) of section 7524 of this title.

(2) Injunctive authority

The district courts of the United States shall have jurisdiction to restrain violations of subsections (a), (f), (g), (k), (*l*), (m), (n), and (*o*) of this section and of the regulations prescribed under subsections (c), (h), (i), (k), (*l*), (m), (n), and (*o*) of this section, to award other appropriate relief, and to compel the furnishing of information and the conduct of tests required by the Administrator under subsection (b) of this section. Actions to restrain such violations and compel such actions shall be brought by and in the name of the United States. In any such action, subpoenas for witnesses who are required to attend a district court in any district may run into any other district.

(e) Testing of fuels and fuel additives

(1) Not later than one year after August 7, 1977, and after notice and opportunity for a public hearing, the Administrator shall promulgate regulations which implement the authority under subsection (b)(2)(A) and (B) with respect to each fuel or fuel additive which is registered on the date of promulgation of such regulations and with respect to each fuel or fuel additive for which an application for registration is filed thereafter.

(2) Regulations under subsection (b) to carry out this subsection shall require that the requisite information be provided to the Administrator by each such manufacturer—

(A) prior to registration, in the case of any fuel or fuel additive which is not registered on the date of promulgation of such regulations; or

(B) not later than three years after the date of promulgation of such regulations, in the case of any fuel or fuel additive which is registered on such date.

(3) In promulgating such regulations, the Administrator may—

(A) exempt any small business (as defined in such regulations) from or defer or modify the requirements of, such regulations with respect to any such small business;

(B) provide for cost-sharing with respect to the testing of any fuel or fuel additive which is manufactured or processed by two or more persons or otherwise provide for shared responsibility to meet the requirements of this section without duplication; or

(C) exempt any person from such regulations with respect to a particular fuel or fuel additive upon a finding that any additional testing of such fuel or fuel additive would be duplicative of adequate existing testing.

(f) New fuels and fuel additives

(1)(A) Effective upon March 31, 1977, it shall be unlawful for any manufacturer of any fuel or fuel additive to first introduce into commerce, or to increase the concentration in use of, any fuel or fuel additive for general use in light duty motor vehicles manufactured after model year 1974 which is not substantially similar to any fuel or fuel additive utilized in the certification of any model year 1975, or subsequent model year, vehicle or engine under section 7525 of this title.

(B) Effective upon November 15, 1990, it shall be unlawful for any manufacturer of any fuel or fuel additive to first introduce into commerce, or to increase the concentration in use of, any fuel or fuel additive for use by any person in motor vehicles manufactured after model year 1974 which is not substantially similar to any fuel or fuel additive utilized in the certification of any model year 1975, or subsequent model year, vehicle or engine under section 7525 of this title.

(2) Effective November 30, 1977, it shall be unlawful for any manufacturer of any fuel to introduce into commerce any gasoline which contains a concentration of manganese in excess of .0625 grams per gallon of fuel, except as otherwise provided pursuant to a waiver under paragraph (4).

(3) Any manufacturer of any fuel or fuel additive which prior to March 31, 1977, and after January 1, 1974, first introduced into commerce or increased the concentration in use of a fuel or fuel additive that would otherwise have been prohibited under paragraph (1)(A) if introduced on or after March 31, 1977 shall, not later than September 15, 1978, cease to distribute such fuel or fuel additive in commerce. During the period beginning 180 days after August 7, 1977, and before September 15, 1978, the Administrator shall prohibit, or restrict the concentration of any fuel additive which he determines will cause or contribute to the failure of an emission control device or system (over the useful life of any vehicle in which such device or system is used) to achieve compliance by the vehicle with the emission standards with respect to which it has been certified under section 7525 of this title.

(4) The Administrator, upon application of any manufacturer of any fuel or fuel additive, may waive the prohibitions established under paragraph (1) or (3) of this subsection or the limitation specified in paragraph (2) of this subsection, if he determines that the applicant has established that such fuel or fuel additive or a specified concentration thereof, and the emission products of such fuel or fuel additive or specified concentration thereof, will not cause or contribute to a failure of any emission control device or system (over the useful life of the motor vehicle, motor vehicle engine, nonroad engine or nonroad vehicle in which such device or system is used) to achieve compliance by the vehicle or engine with the emission standards with respect to which it has been certified pursuant to sections 7525 and 7547(a) of this title. The Administrator shall take final action to grant or deny

an application submitted under this paragraph, after public notice and comment, within 270 days of the receipt of such an application.

(5) No action of the Administrator under this section may be stayed by any court pending judicial review of such action.

(g) Misfueling

(1) No person shall introduce, or cause or allow the introduction of, leaded gasoline into any motor vehicle which is labeled ''unleaded gasoline only,'' which is equipped with a gasoline tank filler inlet designed for the introduction of unleaded gasoline, which is a 1990 or later model year motor vehicle, or which such person knows or should know is a vehicle designed solely for the use of unleaded gasoline.

(2) Beginning October 1, 1993, no person shall introduce or cause or allow the introduction into any motor vehicle of diesel fuel which such person knows or should know contains a concentration of sulfur in excess of 0.05 percent (by weight) or which fails to meet a cetane index minimum of 40 or such equivalent alternative aromatic level as prescribed by the Administrator under subsection (i)(2).

(h) Reid Vapor Pressure requirements

(1) Prohibition

Not later than 6 months after November 15, 1990, the Administrator shall promulgate regulations making it unlawful for any person during the high ozone season (as defined by the Administrator) to sell, offer for sale, dispense, supply, offer for supply, transport, or introduce into commerce gasoline with a Reid Vapor Pressure in excess of 9.0 pounds per square inch (psi). Such regulations shall also establish more stringent Reid Vapor Pressure standards in a nonattainment area as the Administrator finds necessary to generally achieve comparable evaporative emissions (on a per-vehicle basis) in nonattainment areas, taking into consideration the enforceability of such standards, the need of an area for emission control, and economic factors.

(2) Attainment areas

The regulations under this subsection shall not make it unlawful for any person to sell, offer for supply, transport, or introduce into commerce gasoline with a Reid Vapor Pressure of 9.0 pounds per square inch (psi) or lower in any area designated under section 7407 of this title as an attainment area. Notwithstanding the preceding sentence, the Administrator may impose a Reid vapor pressure requirement lower than 9.0 pounds per square inch (psi) in any area, formerly an ozone nonattainment area, which has been redesignated as an attainment area.

(3) Effective date; enforcement

The regulations under this subsection shall provide that the requirements of this subsection shall take effect not later than the high ozone season for 1992, and shall include such provisions as the Administrator determines are necessary to implement and enforce the requirements of this subsection.

(4) Ethanol waiver

For fuel blends containing gasoline and 10 percent denatured anhydrous ethanol, the Reid vapor pressure limitation under this subsection shall be one pound per square inch (psi) greater than the applicable Reid vapor pressure limitations established under paragraph (1); *Provided, however*, That a distributor, blender, marketer, reseller, carrier, retailer, or wholesale purchaser-consumer shall be deemed to be in full compliance with the provisions of this subsection and the regulations promulgated thereunder if it can demonstrate (by showing receipt of a certification or other evidence acceptable to the Administrator) that—

(A) the gasoline portion of the blend complies with the Reid vapor pressure limitations promulgated pursuant to this subsection;

(B) the ethanol portion of the blend does not exceed its waiver condition under subsection (f)(4); and

(C) no additional alcohol or other additive has been added to increase the Reid Vapor Pressure of the ethanol portion of the blend.

(5) Exclusion from ethanol waiver

(A) Promulgation of regulations

Upon notification, accompanied by supporting documentation, from the Governor of a State that the Reid vapor pressure limitation established by paragraph (4) will increase emissions that contribute to air pollution in any area in the State, the Administrator shall, by regulation, apply, in lieu of the Reid vapor pressure limitation established by paragraph (4), the Reid vapor pressure limitation established by paragraph (1) to all fuel blends containing gasoline and 10 percent denatured anhydrous ethanol that are sold, offered for sale, dispensed, supplied, offered for supply, transported, or introduced into commerce in the area during the high ozone season.

(B) Deadline for promulgation

The Administrator shall promulgate regulations under subparagraph (A) not later than 90 days after the date of receipt of a notification from a Governor under that subparagraph.

(C) Effective date

(i) In general

With respect to an area in a State for which the Governor submits a notification under subparagraph (A), the regulations under that subparagraph shall take effect on the later of—

(I) the first day of the first high ozone season for the area that begins after the date of receipt of the notification; or

(II) 1 year after the date of receipt of the notification.

(ii) Extension of effective date based on determination of insufficient supply

(I) In general

If, after receipt of a notification with respect to an area from a Governor of a State under subparagraph (A), the Administrator determines, on the Administrator's own motion or on petition of

any person and after consultation with the Secretary of Energy, that the promulgation of regulations described in subparagraph (A) would result in an insufficient supply of gasoline in the State, the Administrator, by regulation—

(aa) shall extend the effective date of the regulations under clause (i) with respect to the area for not more than 1 year; and

(bb) may renew the extension under item (aa) for two additional periods, each of which shall not exceed 1 year.

(II) Deadline for action on petitions

The Administrator shall act on any petition submitted under subclause (I) not later than 180 days after the date of receipt of the petition.

(6) Areas covered

The provisions of this subsection shall apply only to the 48 contiguous States and the District of Columbia.

(i) Sulfur content requirements for diesel fuel

(1) Effective October 1, 1993, no person shall manufacture, sell, supply, offer for sale or supply, dispense, transport, or introduce into commerce motor vehicle diesel fuel which contains a concentration of sulfur in excess of 0.05 percent (by weight) or which fails to meet a cetane index minimum of 40.

(2) Not later than 12 months after November 15, 1990, the Administrator shall promulgate regulations to implement and enforce the requirements of paragraph (1). The Administrator may require manufacturers and importers of diesel fuel not intended for use in motor vehicles to dye such fuel in a particular manner in order to segregate it from motor vehicle diesel fuel. The Administrator may establish an equivalent alternative aromatic level to the cetane index specification in paragraph (1).

(3) The sulfur content of fuel required to be used in the certification of 1991 through 1993 model year heavy-duty diesel vehicles and engines shall be 0.10 percent (by weight). The sulfur content and cetane index minimum of fuel required to be used in the certification of 1994 and later model year heavy-duty diesel vehicles and engines shall comply with the regulations promulgated under paragraph (2).

(4) The States of Alaska and Hawaii may be exempted from the requirements of this subsection in the same manner as provided in section 7625[4] of this title. The Administrator shall take final action on any petition filed under section 7625[4] of this title or this paragraph for an exemption from the requirements of this subsection, within 12 months from the date of the petition.

(j) Lead substitute gasoline additives

(1) After November 15, 1990, any person proposing to register any gasoline additive under subsection (a) or to use any previously registered additive as a lead substitute may also elect to register the additive as a lead substitute gasoline additive for reducing valve seat wear by providing the Administrator with such relevant information regarding product identity and composition as the Administrator deems necessary for carrying out the responsibilities of paragraph (2) of this subsection (in addition to other information which may be required under subsection (b)).

(2) In addition to the other testing which may be required under subsection (b), in the case of the lead substitute gasoline additives referred to in paragraph (1), the Administrator shall develop and publish a test procedure to determine the additives' effectiveness in reducing valve seat wear and the additives' tendencies to produce engine deposits and other adverse side effects. The test procedures shall be developed in cooperation with the Secretary of Agriculture and with the input of additive manufacturers, engine and engine components manufacturers, and other interested persons. The Administrator shall enter into arrangements with an independent laboratory to conduct tests of each additive using the test procedures developed and published pursuant to this paragraph. The Administrator shall publish the results of the tests by company and additive name in the Federal Register along with, for comparison purposes, the results of applying the same test procedures to gasoline containing 0.1 gram of lead per gallon in lieu of the lead substitute gasoline additive. The Administrator shall not rank or otherwise rate the lead substitute additives. Test procedures shall be established within 1 year after November 15, 1990. Additives shall be tested within 18 months of November 15, 1990, or 6 months after the lead substitute additives are identified to the Administrator, whichever is later.

(3) The Administrator may impose a user fee to recover the costs of testing of any fuel additive referred to in this subsection. The fee shall be paid by the person proposing to register the fuel additive concerned. Such fee shall not exceed $20,000 for a single fuel additive.

(4) There are authorized to be appropriated to the Administrator not more than $1,000,000 for the second full fiscal year after November 15, 1990, to establish test procedures and conduct engine tests as provided in this subsection. Not more than $500,000 per year is authorized to be appropriated for each of the 5 subsequent fiscal years.

(5) Any fees collected under this subsection shall be deposited in a special fund in the United States Treasury for licensing and other services which thereafter shall be available for appropriation, to remain available until expended, to carry out the Agency's activities for which the fees were collected.

(k) Reformulated gasoline for conventional vehicles

(1) EPA regulations

(A) In general

Not later than November 15, 1991, the Administrator shall promulgate regulations under this section establishing requirements for reformulated gasoline to be used in gasoline-fueled vehicles in specified nonattainment areas. Such regulations shall require

[4] So in original. Probably should be section ''7625–1''.

the greatest reduction in emissions of ozone forming volatile organic compounds (during the high ozone season) and emissions of toxic air pollutants (during the entire year) achievable through the reformulation of conventional gasoline, taking into consideration the cost of achieving such emission reductions, any nonair-quality and other air-quality related health and environmental impacts and energy requirements.

(B) Maintenance of toxic air pollutant emissions reductions from reformulated gasoline

(i) Definition of PADD

In this subparagraph the term ''PADD'' means a Petroleum Administration for Defense District.

(ii) Regulations concerning emissions of toxic air pollutants

Not later than 270 days after August 8, 2005, the Administrator shall establish by regulation, for each refinery or importer (other than a refiner or importer in a State that has received a waiver under section 7543(b) of this title with respect to gasoline produced for use in that State), standards for toxic air pollutants from use of the reformulated gasoline produced or distributed by the refiner or importer that maintain the reduction of the average annual aggregate emissions of toxic air pollutants for reformulated gasoline produced or distributed by the refiner or importer during calendar years 2001 and 2002 (as determined on the basis of data collected by the Administrator with respect to the refiner or importer).

(iii) Standards applicable to specific refineries or importers

(I) Applicability of standards

For any calendar year, the standards applicable to a refiner or importer under clause (ii) shall apply to the quantity of gasoline produced or distributed by the refiner or importer in the calendar year only to the extent that the quantity is less than or equal to the average annual quantity of reformulated gasoline produced or distributed by the refiner or importer during calendar years 2001 and 2002.

(II) Applicability of other standards

For any calendar year, the quantity of gasoline produced or distributed by a refiner or importer that is in excess of the quantity subject to subclause (I) shall be subject to standards for emissions of toxic air pollutants promulgated under subparagraph (A) and paragraph (3)(B).

(iv) Credit program

The Administrator shall provide for the granting and use of credits for emissions of toxic air pollutants in the same manner as provided in paragraph (7).

(v) Regional protection of toxics reduction baselines

(I) In general

Not later than 60 days after August 8, 2005, and not later than April 1 of each calendar year that begins after August 8, 2005, the Administrator shall publish in the Federal Register a report that specifies, with respect to the previous calendar year—

(aa) the quantity of reformulated gasoline produced that is in excess of the average annual quantity of reformulated gasoline produced in 2001 and 2002; and

(bb) the reduction of the average annual aggregate emissions of toxic air pollutants in each PADD, based on retail survey data or data from other appropriate sources.

(II) Effect of failure to maintain aggregate toxics reductions

If, in any calendar year, the reduction of the average annual aggregate emissions of toxic air pollutants in a PADD fails to meet or exceed the reduction of the average annual aggregate emissions of toxic air pollutants in the PADD in calendar years 2001 and 2002, the Administrator, not later than 90 days after the date of publication of the report for the calendar year under subclause (I), shall—

(aa) identify, to the maximum extent practicable, the reasons for the failure, including the sources, volumes, and characteristics of reformulated gasoline that contributed to the failure; and

(bb) promulgate revisions to the regulations promulgated under clause (ii), to take effect not earlier than 180 days but not later than 270 days after the date of promulgation, to provide that, notwithstanding clause (iii)(II), all reformulated gasoline produced or distributed at each refiner or importer shall meet the standards applicable under clause (iii)(I) beginning not later than April 1 of the calendar year following publication of the report under subclause (I) and in each calendar year thereafter.

(vi) Not later than July 1, 2007, the Administrator shall promulgate final regulations to control hazardous air pollutants from motor vehicles and motor vehicle fuels, as provided for in section 80.1045 of title 40, Code of Federal Regulations (as in effect on August 8, 2005), and as authorized under section 7521(*l*)[5] of this title. If the Administrator promulgates by such date, final regulations to control hazardous air pollutants from motor vehicles and motor vehicle fuels that achieve and maintain greater overall reductions in emissions of air toxics from reformulated gasoline than the reductions that would be achieved

[5] So in original. See References in Text note below.

under subsection (k)(1)(B) as amended by this clause, then subsections (k)(1)(B)(i) through (k)(1)(B)(v) shall be null and void and regulations promulgated thereunder shall be rescinded and have no further effect.

(2) General requirements

The regulations referred to in paragraph (1) shall require that reformulated gasoline comply with paragraph (3) and with each of the following requirements (subject to paragraph (7)):

(A) NO_x emissions

The emissions of oxides of nitrogen (NO_x) from baseline vehicles when using the reformulated gasoline shall be no greater than the level of such emissions from such vehicles when using baseline gasoline. If the Administrator determines that compliance with the limitation on emissions of oxides of nitrogen under the preceding sentence is technically infeasible, considering the other requirements applicable under this subsection to such gasoline, the Administrator may, as appropriate to ensure compliance with this subparagraph, adjust (or waive entirely), any other requirements of this paragraph or any requirements applicable under paragraph (3)(A).

(B) Benzene content

The benzene content of the gasoline shall not exceed 1.0 percent by volume.

(C) Heavy metals

The gasoline shall have no heavy metals, including lead or manganese. The Administrator may waive the prohibition contained in this subparagraph for a heavy metal (other than lead) if the Administrator determines that addition of the heavy metal to the gasoline will not increase, on an aggregate mass or cancer-risk basis, toxic air pollutant emissions from motor vehicles.

(3) More stringent of formula or performance standards

The regulations referred to in paragraph (1) shall require compliance with the more stringent of either the requirements set forth in subparagraph (A) or the requirements of subparagraph (B) of this paragraph. For purposes of determining the more stringent provision, clause (i) and clause (ii) of subparagraph (B) shall be considered independently.

(A) Formula

(i) Benzene

The benzene content of the reformulated gasoline shall not exceed 1.0 percent by volume.

(ii) Aromatics

The aromatic hydrocarbon content of the reformulated gasoline shall not exceed 25 percent by volume.

(iii) Lead

The reformulated gasoline shall have no lead content.

(iv) Detergents

The reformulated gasoline shall contain additives to prevent the accumulation of deposits in engines or vehicle fuel supply systems.

(B) Performance standard

(i) VOC emissions

During the high ozone season (as defined by the Administrator), the aggregate emissions of ozone forming volatile organic compounds from baseline vehicles when using the reformulated gasoline shall be 15 percent below the aggregate emissions of ozone forming volatile organic compounds from such vehicles when using baseline gasoline. Effective in calendar year 2000 and thereafter, 25 percent shall be substituted for 15 percent in applying this clause, except that the Administrator may adjust such 25 percent requirement to provide for a lesser or greater reduction based on technological feasibility, considering the cost of achieving such reductions in VOC emissions. No such adjustment shall provide for less than a 20 percent reduction below the aggregate emissions of such air pollutants from such vehicles when using baseline gasoline. The reductions required under this clause shall be on a mass basis.

(ii) Toxics

During the entire year, the aggregate emissions of toxic air pollutants from baseline vehicles when using the reformulated gasoline shall be 15 percent below the aggregate emissions of toxic air pollutants from such vehicles when using baseline gasoline. Effective in calendar year 2000 and thereafter, 25 percent shall be substituted for 15 percent in applying this clause, except that the Administrator may adjust such 25 percent requirement to provide for a lesser or greater reduction based on technological feasibility, considering the cost of achieving such reductions in toxic air pollutants. No such adjustment shall provide for less than a 20 percent reduction below the aggregate emissions of such air pollutants from such vehicles when using baseline gasoline. The reductions required under this clause shall be on a mass basis.

Any reduction greater than a specific percentage reduction required under this subparagraph shall be treated as satisfying such percentage reduction requirement.

(4) Certification procedures

(A) Regulations

The regulations under this subsection shall include procedures under which the Administrator shall certify reformulated gasoline as complying with the requirements established pursuant to this subsection. Under such regulations, the Administrator shall establish procedures for any person to petition the Administrator to certify a fuel formulation, or slate of fuel formulations. Such procedures shall further require that the Administrator shall approve or deny such petition within 180 days of receipt. If the Administrator fails to act within such 180-day period, the fuel shall be deemed certified until

the Administrator completes action on the petition.

(B) Certification; equivalency

The Administrator shall certify a fuel formulation or slate of fuel formulations as complying with this subsection if such fuel or fuels—

(i) comply with the requirements of paragraph (2), and

(ii) achieve equivalent or greater reductions in emissions of ozone forming volatile organic compounds and emissions of toxic air pollutants than are achieved by a reformulated gasoline meeting the applicable requirements of paragraph (3).

(C) EPA determination of emissions level

Within 1 year after November 15, 1990, the Administrator shall determine the level of emissions of ozone forming volatile organic compounds and emissions of toxic air pollutants emitted by baseline vehicles when operating on baseline gasoline. For purposes of this subsection, within 1 year after November 15, 1990, the Administrator shall, by rule, determine appropriate measures of, and methodology for, ascertaining the emissions of air pollutants (including calculations, equipment, and testing tolerances).

(5) Prohibition

Effective beginning January 1, 1995, each of the following shall be a violation of this subsection:

(A) The sale or dispensing by any person of conventional gasoline to ultimate consumers in any covered area.

(B) The sale or dispensing by any refiner, blender, importer, or marketer of conventional gasoline for resale in any covered area, without (i) segregating such gasoline from reformulated gasoline, and (ii) clearly marking such conventional gasoline as ''conventional gasoline, not for sale to ultimate consumer in a covered area''.

Any refiner, blender, importer or marketer who purchases property[6] segregated and marked conventional gasoline, and thereafter labels, represents, or wholesales such gasoline as reformulated gasoline shall also be in violation of this subsection. The Administrator may impose sampling, testing, and recordkeeping requirements upon any refiner, blender, importer, or marketer to prevent violations of this section.

(6) Opt-in areas

(A) Classified areas

(i) In general

Upon the application of the Governor of a State, the Administrator shall apply the prohibition set forth in paragraph (5) in any area in the State classified under subpart 2 of part D of subchapter I as a Marginal, Moderate, Serious, or Severe Area (without regard to whether or not the 1980 population of the area exceeds 250,000). In any such case, the Administrator shall establish an effective date for such prohibition as he deems appropriate, not later than January 1, 1995, or 1 year after such application is received, whichever is later. The Administrator shall publish such application in the Federal Register upon receipt.

(ii) Effect of insufficient domestic capacity to produce reformulated gasoline

If the Administrator determines, on the Administrator's own motion or on petition of any person, after consultation with the Secretary of Energy, that there is insufficient domestic capacity to produce gasoline certified under this subsection, the Administrator shall, by rule, extend the effective date of such prohibition in Marginal, Moderate, Serious, or Severe Areas referred to in clause (i) for one additional year, and may, by rule, renew such extension for 2 additional one-year periods. The Administrator shall act on any petition submitted under this subparagraph within 6 months after receipt of the petition. The Administrator shall issue such extensions for areas with a lower ozone classification before issuing any such extension for areas with a higher classification.

(B) Ozone transport region

(i) Application of prohibition

(I) In general

On application of the Governor of a State in the ozone transport region established by section 7511c(a) of this title, the Administrator, not later than 180 days after the date of receipt of the application, shall apply the prohibition specified in paragraph (5) to any area in the State (other than an area classified as a marginal, moderate, serious, or severe ozone nonattainment area under subpart 2 of part D of subchapter I) unless the Administrator determines under clause (iii) that there is insufficient capacity to supply reformulated gasoline.

(II) Publication of application

As soon as practicable after the date of receipt of an application under subclause (I), the Administrator shall publish the application in the Federal Register.

(ii) Period of applicability

Under clause (i), the prohibition specified in paragraph (5) shall apply in a State—

(I) commencing as soon as practicable but not later than 2 years after the date of approval by the Administrator of the application of the Governor of the State; and

(II) ending not earlier than 4 years after the commencement date determined under subclause (I).

(iii) Extension of commencement date based on insufficient capacity

(I) In general

If, after receipt of an application from a Governor of a State under clause (i),

[6] So in original. Probably should be ''properly''.

the Administrator determines, on the Administrator's own motion or on petition of any person, after consultation with the Secretary of Energy, that there is insufficient capacity to supply reformulated gasoline, the Administrator, by regulation—

(aa) shall extend the commencement date with respect to the State under clause (ii)(I) for not more than 1 year; and

(bb) may renew the extension under item (aa) for 2 additional periods, each of which shall not exceed 1 year.

(II) Deadline for action on petitions

The Administrator shall act on any petition submitted under subclause (I) not later than 180 days after the date of receipt of the petition.

(7) Credits

(A) The regulations promulgated under this subsection shall provide for the granting of an appropriate amount of credits to a person who refines, blends, or imports and certifies a gasoline or slate of gasoline that—

(i) has an aromatic hydrocarbon content (by volume) that is less than the maximum aromatic hydrocarbon content required to comply with paragraph (3); or

(ii) has a benzene content (by volume) that is less than the maximum benzene content specified in paragraph (2).

(B) The regulations described in subparagraph (A) shall also provide that a person who is granted credits may use such credits, or transfer all or a portion of such credits to another person for use within the same nonattainment area, for the purpose of complying with this subsection.

(C) The regulations promulgated under subparagraphs (A) and (B) shall ensure the enforcement of the requirements for the issuance, application, and transfer of the credits. Such regulations shall prohibit the granting or transfer of such credits for use with respect to any gasoline in a nonattainment area, to the extent the use of such credits would result in any of the following:

(i) An average gasoline aromatic hydrocarbon content (by volume) for the nonattainment (taking into account all gasoline sold for use in conventional gasoline-fueled vehicles in the nonattainment area) higher than the average fuel aromatic hydrocarbon content (by volume) that would occur in the absence of using any such credits.

(ii) An average benzene content (by volume) for the nonattainment area (taking into account all gasoline sold for use in conventional gasoline-fueled vehicles in the nonattainment area) higher than the average benzene content (by volume) that would occur in the absence of using any such credits.

(8) Anti-dumping rules

(A) In general

Within 1 year after November 15, 1990, the Administrator shall promulgate regulations applicable to each refiner, blender, or importer of gasoline ensuring that gasoline sold or introduced into commerce by such refiner, blender, or importer (other than reformulated gasoline subject to the requirements of paragraph (1)) does not result in average per gallon emissions (measured on a mass basis) of (i) volatile organic compounds, (ii) oxides of nitrogen, (iii) carbon monoxide, and (iv) toxic air pollutants in excess of such emissions of such pollutants attributable to gasoline sold or introduced into commerce in calendar year 1990 by that refiner, blender, or importer. Such regulations shall take effect beginning January 1, 1995.

(B) Adjustments

In evaluating compliance with the requirements of subparagraph (A), the Administrator shall make appropriate adjustments to insure that no credit is provided for improvement in motor vehicle emissions control in motor vehicles sold after the calendar year 1990.

(C) Compliance determined for each pollutant independently

In determining whether there is an increase in emissions in violation of the prohibition contained in subparagraph (A) the Administrator shall consider an increase in each air pollutant referred to in clauses (i) through (iv) as a separate violation of such prohibition, except that the Administrator shall promulgate regulations to provide that any increase in emissions of oxides of nitrogen resulting from adding oxygenates to gasoline may be offset by an equivalent or greater reduction (on a mass basis) in emissions of volatile organic compounds, carbon monoxide, or toxic air pollutants, or any combination of the foregoing.

(D) Compliance period

The Administrator shall promulgate an appropriate compliance period or appropriate compliance periods to be used for assessing compliance with the prohibition contained in subparagraph (A).

(E) Baseline for determining compliance

If the Administrator determines that no adequate and reliable data exists regarding the composition of gasoline sold or introduced into commerce by a refiner, blender, or importer in calendar year 1990, for such refiner, blender, or importer, baseline gasoline shall be substituted for such 1990 gasoline in determining compliance with subparagraph (A).

(9) Emissions from entire vehicle

In applying the requirements of this subsection, the Administrator shall take into account emissions from the entire motor vehicle, including evaporative, running, refueling, and exhaust emissions.

(10) Definitions

For purposes of this subsection—

(A) Baseline vehicles

The term ''baseline vehicles'' mean representative model year 1990 vehicles.

(B) Baseline gasoline

(i) Summertime

The term ''baseline gasoline'' means in the case of gasoline sold during the high ozone period (as defined by the Administrator) a gasoline which meets the following specifications:

BASELINE GASOLINE FUEL PROPERTIES

API Gravity	57.4
Sulfur, ppm	339
Benzene, %	1.53
RVP, psi	8.7
Octane, R+M/2	87.3
IBP, F	91
10%, F	128
50%, F	218
90%, F	330
End Point, F	415
Aromatics, %	32.0
Olefins, %	9.2
Saturates, %	58.8

(ii) Wintertime

The Administrator shall establish the specifications of ''baseline gasoline'' for gasoline sold at times other than the high ozone period (as defined by the Administrator). Such specifications shall be the specifications of 1990 industry average gasoline sold during such period.

(C) Toxic air pollutants

The term ''toxic air pollutants'' means the aggregate emissions of the following:

Benzene
1,3 Butadiene
Polycyclic organic matter (POM)
Acetaldehyde
Formaldehyde.

(D) Covered area

The 9 ozone nonattainment areas having a 1980 population in excess of 250,000 and having the highest ozone design value during the period 1987 through 1989 shall be ''covered areas'' for purposes of this subsection. Effective one year after the reclassification of any ozone nonattainment area as a Severe ozone nonattainment area under section 7511(b) of this title, such Severe area shall also be a ''covered area'' for purposes of this subsection.

(E) Reformulated gasoline

The term ''reformulated gasoline'' means any gasoline which is certified by the Administrator under this section as complying with this subsection.

(F) Conventional gasoline

The term ''conventional gasoline'' means any gasoline which does not meet specifications set by a certification under this subsection.

(*l*) Detergents

Effective beginning January 1, 1995, no person may sell or dispense to an ultimate consumer in the United States, and no refiner or marketer may directly or indirectly sell or dispense to persons who sell or dispense to ultimate consumers in the United States any gasoline which does not contain additives to prevent the accumulation of deposits in engines or fuel supply systems. Not later than 2 years after November 15, 1990, the Administrator shall promulgate a rule establishing specifications for such additives.

(m) Oxygenated fuels

(1) Plan revisions for CO nonattainment areas

(A) Each State in which there is located all or part of an area which is designated under subchapter I as a nonattainment area for carbon monoxide and which has a carbon monoxide design value of 9.5 parts per million (ppm) or above based on data for the 2-year period of 1988 and 1989 and calculated according to the most recent interpretation methodology issued by the Administrator prior to November 15, 1990, shall submit to the Administrator a State implementation plan revision under section 7410 of this title and part D of subchapter I for such area which shall contain the provisions specified under this subsection regarding oxygenated gasoline.

(B) A plan revision which contains such provisions shall also be submitted by each State in which there is located any area which, for any 2-year period after 1989 has a carbon monoxide design value of 9.5 ppm or above. The revision shall be submitted within 18 months after such 2-year period.

(2) Oxygenated gasoline in CO nonattainment areas

Each plan revision under this subsection shall contain provisions to require that any gasoline sold, or dispensed, to the ultimate consumer in the carbon monoxide nonattainment area or sold or dispensed directly or indirectly by fuel refiners or marketers to persons who sell or dispense to ultimate consumers, in the larger of—

(A) the Consolidated Metropolitan Statistical Area (CMSA) in which the area is located, or

(B) if the area is not located in a CMSA, the Metropolitan Statistical Area in which the area is located,

be blended, during the portion of the year in which the area is prone to high ambient concentrations of carbon monoxide to contain not less than 2.7 percent oxygen by weight (subject to a testing tolerance established by the Administrator). The portion of the year in which the area is prone to high ambient concentrations of carbon monoxide shall be as determined by the Administrator, but shall not be less than 4 months. At the request of a State with respect to any area designated as nonattainment for carbon monoxide, the Administrator may reduce the period specified in the preceding sentence if the State can demonstrate that because of meteorological conditions, a reduced period will assure that there will be no exceedances of the carbon monoxide standard outside of such reduced period. For areas with a carbon monoxide design value of 9.5 ppm or more of[7] November 15, 1990, the revision shall provide that such requirement

[7] So in original. Probably should be ''as of''.

shall take effect no later than November 1, 1992 (or at such other date during 1992 as the Administrator establishes under the preceding provisions of this paragraph). For other areas, the revision shall provide that such requirement shall take effect no later than November 1 of the third year after the last year of the applicable 2-year period referred to in paragraph (1) (or at such other date during such third year as the Administrator establishes under the preceding provisions of this paragraph) and shall include a program for implementation and enforcement of the requirement consistent with guidance to be issued by the Administrator.

(3) Waivers

(A) The Administrator shall waive, in whole or in part, the requirements of paragraph (2) upon a demonstration by the State to the satisfaction of the Administrator that the use of oxygenated gasoline would prevent or interfere with the attainment by the area of a national primary ambient air quality standard (or a State or local ambient air quality standard) for any air pollutant other than carbon monoxide.

(B) The Administrator shall, upon demonstration by the State satisfactory to the Administrator, waive the requirement of paragraph (2) where the Administrator determines that mobile sources of carbon monoxide do not contribute significantly to carbon monoxide levels in an area.

(C)(i) Any person may petition the Administrator to make a finding that there is, or is likely to be, for any area, an inadequate domestic supply of, or distribution capacity for, oxygenated gasoline meeting the requirements of paragraph (2) or fuel additives (oxygenates) necessary to meet such requirements. The Administrator shall act on such petition within 6 months after receipt of the petition.

(ii) If the Administrator determines, in response to a petition under clause (i), that there is an inadequate supply or capacity described in clause (i), the Administrator shall delay the effective date of paragraph (2) for 1 year. Upon petition, the Administrator may extend such effective date for one additional year. No partial delay or lesser waiver may be granted under this clause.

(iii) In granting waivers under this subparagraph the Administrator shall consider distribution capacity separately from the adequacy of domestic supply and shall grant such waivers in such manner as will assure that, if supplies of oxygenated gasoline are limited, areas having the highest design value for carbon monoxide will have a priority in obtaining oxygenated gasoline which meets the requirements of paragraph (2).

(iv) As used in this subparagraph, the term distribution capacity includes capacity for transportation, storage, and blending.

(4) Fuel dispensing systems

Any person selling oxygenated gasoline at retail pursuant to this subsection shall be required under regulations promulgated by the Administrator to label the fuel dispensing system with a notice that the gasoline is oxygenated and will reduce the carbon monoxide emissions from the motor vehicle.

(5) Guidelines for credit

The Administrator shall promulgate guidelines, within 9 months after November 15, 1990, allowing the use of marketable oxygen credits from gasolines during that portion of the year specified in paragraph (2) with higher oxygen content than required to offset the sale or use of gasoline with a lower oxygen content than required. No credits may be transferred between nonattainment areas.

(6) Attainment areas

Nothing in this subsection shall be interpreted as requiring an oxygenated gasoline program in an area which is in attainment for carbon monoxide, except that in a carbon monoxide nonattainment area which is redesignated as attainment for carbon monoxide, the requirements of this subsection shall remain in effect to the extent such program is necessary to maintain such standard thereafter in the area.

(7) Failure to attain CO standard

If the Administrator determines under section 7512(b)(2) of this title that the national primary ambient air quality standard for carbon monoxide has not been attained in a Serious Area by the applicable attainment date, the State shall submit a plan revision for the area within 9 months after the date of such determination. The plan revision shall provide that the minimum oxygen content of gasoline referred to in paragraph (2) shall be 3.1 percent by weight unless such requirement is waived in accordance with the provisions of this subsection.

(n) Prohibition on leaded gasoline for highway use

After December 31, 1995, it shall be unlawful for any person to sell, offer for sale, supply, offer for supply, dispense, transport, or introduce into commerce, for use as fuel in any motor vehicle (as defined in section 7554(2)[8] of this title) any gasoline which contains lead or lead additives.

***(o)* Renewable fuel program**

(1) Definitions

In this section:

(A) Additional renewable fuel

The term ''additional renewable fuel'' means fuel that is produced from renewable biomass and that is used to replace or reduce the quantity of fossil fuel present in home heating oil or jet fuel.

(B) Advanced biofuel

(i) In general

The term ''advanced biofuel'' means renewable fuel, other than ethanol derived from corn starch, that has lifecycle greenhouse gas emissions, as determined by the Administrator, after notice and opportunity for comment, that are at least 50 percent less than baseline lifecycle greenhouse gas emissions.

[8] So in original. Probably should be section ''7550(2)''.

(ii) Inclusions

The types of fuels eligible for consideration as ''advanced biofuel'' may include any of the following:

(I) Ethanol derived from cellulose, hemicellulose, or lignin.

(II) Ethanol derived from sugar or starch (other than corn starch).

(III) Ethanol derived from waste material, including crop residue, other vegetative waste material, animal waste, and food waste and yard waste.

(IV) Biomass-based diesel.

(V) Biogas (including landfill gas and sewage waste treatment gas) produced through the conversion of organic matter from renewable biomass.

(VI) Butanol or other alcohols produced through the conversion of organic matter from renewable biomass.

(VII) Other fuel derived from cellulosic biomass.

(C) Baseline lifecycle greenhouse gas emissions

The term ''baseline lifecycle greenhouse gas emissions'' means the average lifecycle greenhouse gas emissions, as determined by the Administrator, after notice and opportunity for comment, for gasoline or diesel (whichever is being replaced by the renewable fuel) sold or distributed as transportation fuel in 2005.

(D) Biomass-based diesel

The term ''biomass-based diesel'' means renewable fuel that is biodiesel as defined in section 13220(f) of this title and that has lifecycle greenhouse gas emissions, as determined by the Administrator, after notice and opportunity for comment, that are at least 50 percent less than the baseline lifecycle greenhouse gas emissions. Notwithstanding the preceding sentence, renewable fuel derived from co-processing biomass with a petroleum feedstock shall be advanced biofuel if it meets the requirements of subparagraph (B), but is not biomass-based diesel.

(E) Cellulosic biofuel

The term ''cellulosic biofuel'' means renewable fuel derived from any cellulose, hemicellulose, or lignin that is derived from renewable biomass and that has lifecycle greenhouse gas emissions, as determined by the Administrator, that are at least 60 percent less than the baseline lifecycle greenhouse gas emissions.

(F) Conventional biofuel

The term ''conventional biofuel'' means renewable fuel that is ethanol derived from corn starch.

(G) Greenhouse gas

The term ''greenhouse gas'' means carbon dioxide, hydrofluorocarbons, methane, nitrous oxide, perfluorocarbons,[9] sulfur hexafluoride. The Administrator may include any other anthropogenically-emitted gas that is determined by the Administrator, after notice and comment, to contribute to global warming.

(H) Lifecycle greenhouse gas emissions

The term ''lifecycle greenhouse gas emissions'' means the aggregate quantity of greenhouse gas emissions (including direct emissions and significant indirect emissions such as significant emissions from land use changes), as determined by the Administrator, related to the full fuel lifecycle, including all stages of fuel and feedstock production and distribution, from feedstock generation or extraction through the distribution and delivery and use of the finished fuel to the ultimate consumer, where the mass values for all greenhouse gases are adjusted to account for their relative global warming potential.

(I) Renewable biomass

The term ''renewable biomass'' means each of the following:

(i) Planted crops and crop residue harvested from agricultural land cleared or cultivated at any time prior to December 19, 2007, that is either actively managed or fallow, and nonforested.

(ii) Planted trees and tree residue from actively managed tree plantations on non-federal[10] land cleared at any time prior to December 19, 2007, including land belonging to an Indian tribe or an Indian individual, that is held in trust by the United States or subject to a restriction against alienation imposed by the United States.

(iii) Animal waste material and animal byproducts.

(iv) Slash and pre-commercial thinnings that are from non-federal[10] forestlands, including forestlands belonging to an Indian tribe or an Indian individual, that are held in trust by the United States or subject to a restriction against alienation imposed by the United States, but not forests or forestlands that are ecological communities with a global or State ranking of critically imperiled, imperiled, or rare pursuant to a State Natural Heritage Program, old growth forest, or late successional forest.

(v) Biomass obtained from the immediate vicinity of buildings and other areas regularly occupied by people, or of public infrastructure, at risk from wildfire.

(vi) Algae.

(vii) Separated yard waste or food waste, including recycled cooking and trap grease.

(J) Renewable fuel

The term ''renewable fuel'' means fuel that is produced from renewable biomass and that is used to replace or reduce the quantity of fossil fuel present in a transportation fuel.

(K) Small refinery

The term ''small refinery'' means a refinery for which the average aggregate daily

[9] So in original. The word ''and'' probably should appear.

[10] So in original. Probably should be ''non-Federal''.

crude oil throughput for a calendar year (as determined by dividing the aggregate throughput for the calendar year by the number of days in the calendar year) does not exceed 75,000 barrels.

(L) Transportation fuel

The term ''transportation fuel'' means fuel for use in motor vehicles, motor vehicle engines, nonroad vehicles, or nonroad engines (except for ocean-going vessels).

(2) Renewable fuel program

(A) Regulations

(i) In general

Not later than 1 year after August 8, 2005, the Administrator shall promulgate regulations to ensure that gasoline sold or introduced into commerce in the United States (except in noncontiguous States or territories), on an annual average basis, contains the applicable volume of renewable fuel determined in accordance with subparagraph (B). Not later than 1 year after December 19, 2007, the Administrator shall revise the regulations under this paragraph to ensure that transportation fuel sold or introduced into commerce in the United States (except in noncontiguous States or territories), on an annual average basis, contains at least the applicable volume of renewable fuel, advanced biofuel, cellulosic biofuel, and biomass-based diesel, determined in accordance with subparagraph (B) and, in the case of any such renewable fuel produced from new facilities that commence construction after December 19, 2007, achieves at least a 20 percent reduction in lifecycle greenhouse gas emissions compared to baseline lifecycle greenhouse gas emissions.

(ii) Noncontiguous State opt-in

(I) In general

On the petition of a noncontiguous State or territory, the Administrator may allow the renewable fuel program established under this subsection to apply in the noncontiguous State or territory at the same time or any time after the Administrator promulgates regulations under this subparagraph.

(II) Other actions

In carrying out this clause, the Administrator may—

(aa) issue or revise regulations under this paragraph;

(bb) establish applicable percentages under paragraph (3);

(cc) provide for the generation of credits under paragraph (5); and

(dd) take such other actions as are necessary to allow for the application of the renewable fuels program in a noncontiguous State or territory.

(iii) Provisions of regulations

Regardless of the date of promulgation, the regulations promulgated under clause (i)—

(I) shall contain compliance provisions applicable to refineries, blenders, distributors, and importers, as appropriate, to ensure that the requirements of this paragraph are met; but

(II) shall not—

(aa) restrict geographic areas in which renewable fuel may be used; or

(bb) impose any per-gallon obligation for the use of renewable fuel.

(iv) Requirement in case of failure to promulgate regulations

If the Administrator does not promulgate regulations under clause (i), the percentage of renewable fuel in gasoline sold or dispensed to consumers in the United States, on a volume basis, shall be 2.78 percent for calendar year 2006.

(B) Applicable volumes

(i) Calendar years after 2005

(I) Renewable fuel

For the purpose of subparagraph (A), the applicable volume of renewable fuel for the calendar years 2006 through 2022 shall be determined in accordance with the following table:

Calendar year:	Applicable volume of renewable fuel (in billions of gallons):
2006	4.0
2007	4.7
2008	9.0
2009	11.1
2010	12.95
2011	13.95
2012	15.2
2013	16.55
2014	18.15
2015	20.5
2016	22.25
2017	24.0
2018	26.0
2019	28.0
2020	30.0
2021	33.0
2022	36.0

(II) Advanced biofuel

For the purpose of subparagraph (A), of the volume of renewable fuel required under subclause (I), the applicable volume of advanced biofuel for the calendar years 2009 through 2022 shall be determined in accordance with the following table:

Calendar year:	Applicable volume of advanced biofuel (in billions of gallons):
2009	0.6
2010	0.95
2011	1.35
2012	2.0
2013	2.75
2014	3.75
2015	5.5
2016	7.25
2017	9.0

Calendar year:	Applicable volume of advanced biofuel (in billions of gallons):
2018	11.0
2019	13.0
2020	15.0
2021	18.0
2022	21.0

(III) Cellulosic biofuel

For the purpose of subparagraph (A), of the volume of advanced biofuel required under subclause (II), the applicable volume of cellulosic biofuel for the calendar years 2010 through 2022 shall be determined in accordance with the following table:

Calendar year:	Applicable volume of cellulosic biofuel (in billions of gallons):
2010	0.1
2011	0.25
2012	0.5
2013	1.0
2014	1.75
2015	3.0
2016	4.25
2017	5.5
2018	7.0
2019	8.5
2020	10.5
2021	13.5
2022	16.0

(IV) Biomass-based diesel

For the purpose of subparagraph (A), of the volume of advanced biofuel required under subclause (II), the applicable volume of biomass-based diesel for the calendar years 2009 through 2012 shall be determined in accordance with the following table:

Calendar year:	Applicable volume of biomass-based diesel (in billions of gallons):
2009	0.5
2010	0.65
2011	0.80
2012	1.0

(ii) Other calendar years

For the purposes of subparagraph (A), the applicable volumes of each fuel specified in the tables in clause (i) for calendar years after the calendar years specified in the tables shall be determined by the Administrator, in coordination with the Secretary of Energy and the Secretary of Agriculture, based on a review of the implementation of the program during calendar years specified in the tables, and an analysis of—

(I) the impact of the production and use of renewable fuels on the environment, including on air quality, climate change, conversion of wetlands, ecosystems, wildlife habitat, water quality, and water supply;

(II) the impact of renewable fuels on the energy security of the United States;

(III) the expected annual rate of future commercial production of renewable fuels, including advanced biofuels in each category (cellulosic biofuel and biomass-based diesel);

(IV) the impact of renewable fuels on the infrastructure of the United States, including deliverability of materials, goods, and products other than renewable fuel, and the sufficiency of infrastructure to deliver and use renewable fuel;

(V) the impact of the use of renewable fuels on the cost to consumers of transportation fuel and on the cost to transport goods; and

(VI) the impact of the use of renewable fuels on other factors, including job creation, the price and supply of agricultural commodities, rural economic development, and food prices.

The Administrator shall promulgate rules establishing the applicable volumes under this clause no later than 14 months before the first year for which such applicable volume will apply.

(iii) Applicable volume of advanced biofuel

For the purpose of making the determinations in clause (ii), for each calendar year, the applicable volume of advanced biofuel shall be at least the same percentage of the applicable volume of renewable fuel as in calendar year 2022.

(iv) Applicable volume of cellulosic biofuel

For the purpose of making the determinations in clause (ii), for each calendar year, the applicable volume of cellulosic biofuel established by the Administrator shall be based on the assumption that the Administrator will not need to issue a waiver for such years under paragraph (7)(D).

(v) Minimum applicable volume of biomass-based diesel

For the purpose of making the determinations in clause (ii), the applicable volume of biomass-based diesel shall not be less than the applicable volume listed in clause (i)(IV) for calendar year 2012.

(3) Applicable percentages

(A) Provision of estimate of volumes of gasoline sales

Not later than October 31 of each of calendar years 2005 through 2021, the Administrator of the Energy Information Administration shall provide to the Administrator of the Environmental Protection Agency an estimate, with respect to the following calendar year, of the volumes of transportation fuel, biomass-based diesel, and cellulosic biofuel projected to be sold or introduced into commerce in the United States.

(B) Determination of applicable percentages

(i) In general

Not later than November 30 of each of calendar years 2005 through 2021, based on the estimate provided under subparagraph (A), the Administrator of the Environmental Protection Agency shall determine and publish in the Federal Register, with respect to the following calendar year, the renewable fuel obligation that ensures that the requirements of paragraph (2) are met.

(ii) Required elements

The renewable fuel obligation determined for a calendar year under clause (i) shall—

(I) be applicable to refineries, blenders, and importers, as appropriate;

(II) be expressed in terms of a volume percentage of transportation fuel sold or introduced into commerce in the United States; and

(III) subject to subparagraph (C)(i), consist of a single applicable percentage that applies to all categories of persons specified in subclause (I).

(C) Adjustments

In determining the applicable percentage for a calendar year, the Administrator shall make adjustments—

(i) to prevent the imposition of redundant obligations on any person specified in subparagraph (B)(ii)(I); and

(ii) to account for the use of renewable fuel during the previous calendar year by small refineries that are exempt under paragraph (9).

(4) Modification of greenhouse gas reduction percentages

(A) In general

The Administrator may, in the regulations under the last sentence of paragraph (2)(A)(i), adjust the 20 percent, 50 percent, and 60 percent reductions in lifecycle greenhouse gas emissions specified in paragraphs (2)(A)(i) (relating to renewable fuel), (1)(D) (relating to biomass-based diesel), (1)(B)(i) (relating to advanced biofuel), and (1)(E) (relating to cellulosic biofuel) to a lower percentage. For the 50 and 60 percent reductions, the Administrator may make such an adjustment only if he determines that generally such reduction is not commercially feasible for fuels made using a variety of feedstocks, technologies, and processes to meet the applicable reduction.

(B) Amount of adjustment

In promulgating regulations under this paragraph, the specified 50 percent reduction in greenhouse gas emissions from advanced biofuel and in biomass-based diesel may not be reduced below 40 percent. The specified 20 percent reduction in greenhouse gas emissions from renewable fuel may not be reduced below 10 percent, and the specified 60 percent reduction in greenhouse gas emissions from cellulosic biofuel may not be reduced below 50 percent.

(C) Adjusted reduction levels

An adjustment under this paragraph to a percent less than the specified 20 percent greenhouse gas reduction for renewable fuel shall be the minimum possible adjustment, and the adjusted greenhouse gas reduction shall be established by the Administrator at the maximum achievable level, taking cost in consideration, for natural gas fired corn-based ethanol plants, allowing for the use of a variety of technologies and processes. An adjustment in the 50 or 60 percent greenhouse gas levels shall be the minimum possible adjustment for the fuel or fuels concerned, and the adjusted greenhouse gas reduction shall be established at the maximum achievable level, taking cost in consideration, allowing for the use of a variety of feedstocks, technologies, and processes.

(D) 5-year review

Whenever the Administrator makes any adjustment under this paragraph, not later than 5 years thereafter he shall review and revise (based upon the same criteria and standards as required for the initial adjustment) the regulations establishing the adjusted level.

(E) Subsequent adjustments

After the Administrator has promulgated a final rule under the last sentence of paragraph (2)(A)(i) with respect to the method of determining lifecycle greenhouse gas emissions, except as provided in subparagraph (D), the Administrator may not adjust the percent greenhouse gas reduction levels unless he determines that there has been a significant change in the analytical methodology used for determining the lifecycle greenhouse gas emissions. If he makes such determination, he may adjust the 20, 50, or 60 percent reduction levels through rulemaking using the criteria and standards set forth in this paragraph.

(F) Limit on upward adjustments

If, under subparagraph (D) or (E), the Administrator revises a percent level adjusted as provided in subparagraphs (A), (B), and (C) to a higher percent, such higher percent may not exceed the applicable percent specified in paragraph (2)(A)(i), (1)(D), (1)(B)(i), or (1)(E).

(G) Applicability of adjustments

If the Administrator adjusts, or revises, a percent level referred to in this paragraph or makes a change in the analytical methodology used for determining the lifecycle greenhouse gas emissions, such adjustment, revision, or change (or any combination thereof) shall only apply to renewable fuel from new facilities that commence construction after the effective date of such adjustment, revision, or change.

(5) Credit program

(A) In general

The regulations promulgated under paragraph (2)(A) shall provide—

(i) for the generation of an appropriate amount of credits by any person that re-

section'' are substituted for ''Except as modified pursuant to subparagraph (B) or (E) of this subsection'' for clarity.

Editorial Notes

AMENDMENTS

2019—Subsec. (c). Pub. L. 116–6 substituted ''Kansas, and Oregon'' for ''and Kansas'' in heading and added par. (6).

2015—Subsec. (a)(1). Pub. L. 114–94 inserted before period at end '', but not including a trailer or a semitrailer transported as part of a towaway trailer transporter combination (as defined in section 31111(a))''.

Subsec. (c). Pub. L. 114–113, §137(b)(1), substituted ''Nebraska, and Kansas'' for ''and Nebraska'' in heading.

Subsec. (c)(3). Pub. L. 114–113, §137(b)(2), substituted a semicolon for ''; and'' at end.

Subsec. (c)(4). Pub. L. 114–113, §137(b)(3), substituted ''; and'' for period at end.

Subsec. (c)(5). Pub. L. 114–113, §137(a), substituted ''Nebraska and Kansas may'' for ''Nebraska may'' and ''the relevant state'' for ''the State of Nebraska''.

2005—Subsec. (c). Pub. L. 109–59, §4112(b), substituted ''Iowa, and Nebraska'' for ''and Iowa'' in heading.

Subsec. (c)(5). Pub. L. 109–59, §4112(a), added par. (5).

1997—Subsec. (d)(4). Pub. L. 105–66 substituted ''February 28, 1998'' for ''September 30, 1997''.

1996—Subsec. (d)(4). Pub. L. 104–205, which directed amendment of this section by adding a new subsection designated par. (4) without specifying where, was executed by adding par. (4) to subsec. (d) to reflect the probable intent of Congress.

1995—Subsec. (c). Pub. L. 104–59 substituted ''Alaska, and Iowa'' for ''and Alaska'' in heading and added par. (4).

Statutory Notes and Related Subsidiaries

EFFECTIVE DATE OF 2015 AMENDMENT

Amendment by Pub. L. 114–94 effective Oct. 1, 2015, see section 1003 of Pub. L. 114–94, set out as a note under section 5313 of Title 5, Government Organization and Employees.

§ 31113. Width limitations

(a) GENERAL LIMITATIONS.—(1) Except as provided in subsection (e) of this section, a State (except Hawaii) may not prescribe or enforce a regulation of commerce that imposes a vehicle width limitation of more or less than 102 inches on a commercial motor vehicle operating on—

(A) a segment of the Dwight D. Eisenhower System of Interstate and Defense Highways (except a segment exempted under subsection (e) of this section);

(B) a qualifying Federal-aid highway designated by the Secretary of Transportation, with traffic lanes designed to be at least 12 feet wide; or

(C) a qualifying Federal-aid Primary System highway designated by the Secretary if the Secretary decides the designation is consistent with highway safety.

(2) Notwithstanding paragraph (1) of this subsection, a State may continue to enforce a regulation of commerce in effect on April 6, 1983, that applies to a commercial motor vehicle of more than 102 inches in width, until the date on which the State prescribes a regulation of commerce that complies with this subsection.

(3) A Federal-aid highway (except an interstate highway) not designated under this subsection on June 5, 1984, may be designated under this subsection only with the agreement of the chief executive officer of the State in which the highway is located.

(b) EXCLUSION OF SAFETY AND ENERGY CONSERVATION DEVICES.—Width calculated under this section does not include a safety or energy conservation device the Secretary decides is necessary for safe and efficient operation of a commercial motor vehicle.

(c) SPECIAL USE PERMITS.—A State may grant a special use permit to a commercial motor vehicle that is more than 102 inches in width.

(d) STATE ENFORCEMENT.—Consistent with this section, a State may enforce a commercial motor vehicle width limitation of 102 inches on a segment of the Dwight D. Eisenhower System of Interstate and Defense Highways (except a segment exempted under subsection (e) of this section) or other qualifying Federal-aid highway designated by the Secretary.

(e) EXEMPTIONS.—(1) If the chief executive officer of a State, after consulting under paragraph (2) of this subsection, decides a segment of the Dwight D. Eisenhower System of Interstate and Defense Highways is not capable of safely accommodating a commercial motor vehicle having the width provided in subsection (a) of this section, the chief executive officer may notify the Secretary of that decision and request the Secretary to exempt that segment from subsection (a) to allow the State to impose a width limitation of less than 102 inches for a vehicle (except a bus) on that segment.

(2) Before making a decision under paragraph (1) of this subsection, the chief executive officer shall consult with units of local government in the State in which the segment of the Dwight D. Eisenhower System of Interstate and Defense Highways is located and with the chief executive officer of any adjacent State that may be directly affected by the exemption. As part of the consultations, consideration shall be given to any potential alternative route that serves the area in which the segment is located and can safely accommodate a commercial motor vehicle having the width provided for in subsection (a) of this section.

(3) A chief executive officer's notification under this subsection must include specific evidence of safety problems supporting the officer's decision and the results of consultations about alternative routes.

(4)(A) If the Secretary decides, on request of a chief executive officer or on the Secretary's own initiative, a segment of the Dwight D. Eisenhower System of Interstate and Defense Highways is not capable of safely accommodating a commercial motor vehicle having a width provided in subsection (a) of this section, the Secretary shall exempt the segment from subsection (a) to allow the State to impose a width limitation of less than 102 inches for a vehicle (except a bus) on that segment. Before making a decision under this paragraph, the Secretary shall consider any possible alternative route that serves the area in which the segment is located.

(B) The Secretary shall make a decision about a specific segment not later than 120 days after the date of receipt of notification from a chief

executive officer under paragraph (1) of this subsection or the date on which the Secretary initiates action under subparagraph (A) of this paragraph, whichever is applicable. If the Secretary finds the decision will not be made in time, the Secretary immediately shall notify Congress, giving the reasons for the delay, information about the resources assigned, and the projected date for the decision.

(C) Before making a decision, the Secretary shall give an interested person notice and an opportunity for comment. If the Secretary exempts a segment under this subsection before the final regulations under subsection (a) of this section are prescribed, the Secretary shall include the exemption as part of the final regulations. If the Secretary exempts the segment after the final regulations are prescribed, the Secretary shall publish the exemption as an amendment to the final regulations.

(Pub. L. 103–272, § 1(e), July 5, 1994, 108 Stat. 997.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
31113(a)	49 App.:2316(a), (f).	Jan. 6, 1983, Pub. L. 97–424, 96 Stat. 2097, § 416(a), (d), (f); added Apr. 5, 1983, Pub. L. 98–17, § 1(a), 97 Stat. 59; Oct. 30, 1984, Pub. L. 98–554, §§ 103(1), 104(d), (e), 105, 98 Stat. 2830, 2831.
31113(b)	49 App.:2316(b).	Jan. 6, 1983, Pub. L. 97–424, 96 Stat. 2097, § 416(b), (c); added Apr. 5, 1983, Pub. L. 98–17, § 1(a), 97 Stat. 59.
31113(c)	49 App.:2316(c).	
31113(d)	49 App.:2316(d).	
31113(e)	49 App.:2316(e).	Jan. 6, 1983, Pub. L. 97–424, 96 Stat. 2097, § 416(e); added Oct. 30, 1984, Pub. L. 98–554, § 103(2), 98 Stat. 2830.

In this section, the word ''commercial'' is added before ''motor vehicle'' for consistency. The words ''Dwight D. Eisenhower System of Interstate and Defense Highways'' are substituted for ''National System of Interstate and Defense Highways'' because of the Act of October 15, 1990 (Public Law 101–427, 104 Stat. 927).

In subsection (a)(1), before clause (A), the text of 49 App.:2316(f) is omitted as obsolete. The word ''prescribe'' is substituted for ''establish, maintain'' for consistency in the revised title and with other titles of the United States Code. The words ''a commercial motor vehicle operating on'' are added for clarity.

In subsection (b), the words ''or energy conservation'' are added for consistency with section 31111(d) of the revised title and because of the reference to ''efficient operation''.

In subsection (e)(4)(C), the word ''amendment'' is substituted for ''revision'' for consistency in the revised title.

§ 31114. Access to the Interstate System

(a) PROHIBITION ON DENYING ACCESS.—A State may not enact or enforce a law denying to a commercial motor vehicle subject to this subchapter or subchapter I of this chapter reasonable access between—

(1) the Dwight D. Eisenhower System of Interstate and Defense Highways (except a segment exempted under section 31111(f) or 31113(e) of this title) and other qualifying Federal-aid Primary System highways designated by the Secretary of Transportation; and

(2) terminals, facilities for food, fuel, repairs, and rest, and points of loading and unloading for household goods carriers, motor carriers of passengers, any towaway trailer transporter combination (as defined in section 31111(a)), or any truck tractor-semitrailer combination in which the semitrailer has a length of not more than 28.5 feet and that generally operates as part of a vehicle combination described in section 31111(c) of this title.

(b) EXCEPTION.—This section does not prevent a State or local government from imposing reasonable restrictions, based on safety considerations, on a truck tractor-semitrailer combination in which the semitrailer has a length of not more than 28.5 feet and that generally operates as part of a vehicle combination described in section 31111(c) of this title.

(Pub. L. 103–272, § 1(e), July 5, 1994, 108 Stat. 999; Pub. L. 114–94, div. A, title V, § 5523(c)(2), Dec. 4, 2015, 129 Stat. 1560.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
31114(a)	49 App.:2312(a).	Jan. 6, 1983, Pub. L. 97–424, § 412, 96 Stat. 2160; Oct. 30, 1984, Pub. L. 98–554, §§ 104(c), 106, 98 Stat. 2831, 2832; Dec. 18, 1991, Pub. L. 102–240, § 4006(b)(2), 105 Stat. 2151.
31114(b)	49 App.:2312(b).	

In subsection (a), the words ''Dwight D. Eisenhower System of Interstate and Defense Highways'' are substituted for ''Interstate and Defense Highway System'' for consistency in the revised chapter.

Editorial Notes

AMENDMENTS

2015—Subsec. (a)(2). Pub. L. 114–94 inserted ''any towaway trailer transporter combination (as defined in section 31111(a)),'' after ''passengers,''.

Statutory Notes and Related Subsidiaries

EFFECTIVE DATE OF 2015 AMENDMENT

Amendment by Pub. L. 114–94 effective Oct. 1, 2015, see section 1003 of Pub. L. 114–94, set out as a note under section 5313 of Title 5, Government Organization and Employees.

§ 31115. Enforcement

On the request of the Secretary of Transportation, the Attorney General shall bring a civil action for appropriate injunctive relief to ensure compliance with this subchapter or subchapter I of this chapter. The action may be brought in a district court of the United States in any State in which the relief is required. On a proper showing, the court shall issue a temporary restraining order or preliminary or permanent injunction. An injunction under this section may order a State or person to comply with this subchapter, subchapter I, or a regulation prescribed under this subchapter or subchapter I.

(Pub. L. 103–272, § 1(e), July 5, 1994, 108 Stat. 999.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
31115	49 App.:2313.	Jan. 6, 1983, Pub. L. 97–424, § 413, 96 Stat. 2160; Oct. 30, 1984, Pub. L. 98–554, § 214, 98 Stat. 2844.

Statutory Notes and Related Subsidiaries

EFFECTIVE DATE OF 2012 AMENDMENT

Amendment by Pub. L. 112–141 effective Oct. 1, 2012, see section 3(a) of Pub. L. 112–141, set out as an Effective and Termination Dates of 2012 Amendment note under section 101 of Title 23, Highways.

§ 32710. Civil actions by private persons

(a) VIOLATION AND AMOUNT OF DAMAGES.—A person that violates this chapter or a regulation prescribed or order issued under this chapter, with intent to defraud, is liable for 3 times the actual damages or $10,000, whichever is greater.

(b) CIVIL ACTIONS.—A person may bring a civil action to enforce a claim under this section in an appropriate United States district court or in another court of competent jurisdiction. The action must be brought not later than 2 years after the claim accrues. The court shall award costs and a reasonable attorney's fee to the person when a judgment is entered for that person.

(Pub. L. 103–272, § 1(e), July 5, 1994, 108 Stat. 1055; Pub. L. 112–141, div. C, title I, § 31206(2), July 6, 2012, 126 Stat. 761.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
32710(a)	15:1989(a)(1).	Oct. 20, 1972, Pub. L. 92–513, § 409, 86 Stat. 963.
32710(b)	15:1989(a)(2), (b).	

In subsection (a), the words ''this chapter or a regulation prescribed or order issued under this chapter'' are substituted for ''requirement imposed under this subchapter'' for consistency.

In subsection (b), the words ''A person may bring a civil action to enforce a claim'' are substituted for ''An action to enforce any liability created . . . may be brought'' for consistency with rule 2 of the Federal Rules of Civil Procedure (28 App. U.S.C.). The word ''appropriate'' is added for clarity. The words ''without regard to the amount in controversy'' are omitted because jurisdiction is now allowed under 28:1331 without regard to the amount in controversy. The words ''after the claim accrues'' are substituted for ''from the date on which the liability arises'' to eliminate unnecessary words. The words ''The court shall award . . . to the person when a judgment is entered for that person'' are substituted for ''in the case of any successful action to enforce the foregoing liability . . . as determined by the court'' for clarity.

Editorial Notes

AMENDMENTS

2012—Subsec. (a). Pub. L. 112–141 substituted ''$10,000'' for ''$1,500''.

Statutory Notes and Related Subsidiaries

EFFECTIVE DATE OF 2012 AMENDMENT

Amendment by Pub. L. 112–141 effective Oct. 1, 2012, see section 3(a) of Pub. L. 112–141, set out as an Effective and Termination Dates of 2012 Amendment note under section 101 of Title 23, Highways.

§ 32711. Relationship to State law

Except to the extent that State law is inconsistent with this chapter, this chapter does not—

(1) affect a State law on disconnecting, altering, or tampering with an odometer with intent to defraud; or

(2) exempt a person from complying with that law.

(Pub. L. 103–272, § 1(e), July 5, 1994, 108 Stat. 1056.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
32711	15:1991.	Oct. 20, 1972, Pub. L. 92–513, § 418, 86 Stat. 963; July 14, 1976, Pub. L. 94–364, § 408(1), 90 Stat. 984.

In this section, before clause (1), the words ''and then only to the extent of the inconsistency'' are omitted as surplus. In clause (1), the word ''affect'' is substituted for ''annul, alter, or affect'' to eliminate unnecessary words. In clause (2), the words ''subject to the provisions of this subchapter'' are omitted as surplus.

CHAPTER 329—AUTOMOBILE FUEL ECONOMY

Editorial Notes

AMENDMENTS

1994—Pub. L. 103–429, § 6(43)(C), Oct. 31, 1994, 108 Stat. 4383, added items 32918 and 32919 and struck out former item 32918 ''Preemption''.

§ 32901. Definitions

(a) GENERAL.—In this chapter—

(1) ''alternative fuel'' means—

(A) methanol;

(B) denatured ethanol;

(C) other alcohols;

(D) except as provided in subsection (b) of this section, a mixture containing at least 85 percent of methanol, denatured ethanol, and other alcohols by volume with gasoline or other fuels;

(E) natural gas;

(F) liquefied petroleum gas;

(G) hydrogen;

(H) coal derived liquid fuels;

(I) fuels (except alcohol) derived from biological materials;

(J) electricity (including electricity from solar energy); and

(K) any other fuel the Secretary of Transportation prescribes by regulation that is

not substantially petroleum and that would yield substantial energy security and environmental benefits.

(2) ''alternative fueled automobile'' means an automobile that is a—
(A) dedicated automobile; or
(B) dual fueled automobile.

(3) except as provided in section 32908 of this title, ''automobile'' means a 4-wheeled vehicle that is propelled by fuel, or by alternative fuel, manufactured primarily for use on public streets, roads, and highways and rated at less than 10,000 pounds gross vehicle weight, except—
(A) a vehicle operated only on a rail line;
(B) a vehicle manufactured in different stages by 2 or more manufacturers, if no intermediate or final-stage manufacturer of that vehicle manufactures more than 10,000 multi-stage vehicles per year; or
(C) a work truck.

(4) ''automobile manufactured by a manufacturer'' includes every automobile manufactured by a person that controls, is controlled by, or is under common control with the manufacturer, but does not include an automobile manufactured by the person that is exported not later than 30 days after the end of the model year in which the automobile is manufactured.

(5) ''average fuel economy'' means average fuel economy determined under section 32904 of this title.

(6) ''average fuel economy standard'' means a performance standard specifying a minimum level of average fuel economy applicable to a manufacturer in a model year.

(7) ''commercial medium- and heavy-duty on-highway vehicle'' means an on-highway vehicle with a gross vehicle weight rating of 10,000 pounds or more.

(8) ''dedicated automobile'' means an automobile that operates only on alternative fuel.

(9) ''dual fueled automobile'' means an automobile that—
(A) is capable of operating on alternative fuel or a mixture of biodiesel and diesel fuel meeting the standard established by the American Society for Testing and Materials or under section 211(u) of the Clean Air Act (42 U.S.C. 7545(u)) for fuel containing 20 percent biodiesel (commonly known as ''B20'') and on gasoline or diesel fuel;
(B) provides equal or superior energy efficiency, as calculated for the applicable model year during fuel economy testing for the United States Government, when operating on alternative fuel as when operating on gasoline or diesel fuel;
(C) for model years 1993–1995 for an automobile capable of operating on a mixture of an alternative fuel and gasoline or diesel fuel and if the Administrator of the Environmental Protection Agency decides to extend the application of this subclause, for an additional period ending not later than the end of the last model year to which section 32905(b) and (d) of this title applies, provides equal or superior energy efficiency, as calculated for the applicable model year during fuel economy testing for the Government, when operating on a mixture of alternative fuel and gasoline or diesel fuel containing exactly 50 percent gasoline or diesel fuel as when operating on gasoline or diesel fuel; and
(D) for a passenger automobile, meets or exceeds the minimum driving range prescribed under subsection (c) of this section.

(10) ''fuel'' means—
(A) gasoline;
(B) diesel oil; or
(C) other liquid or gaseous fuel that the Secretary decides by regulation to include in this definition as consistent with the need of the United States to conserve energy.

(11) ''fuel economy'' means the average number of miles traveled by an automobile for each gallon of gasoline (or equivalent amount of other fuel) used, as determined by the Administrator under section 32904(c) of this title.

(12) ''import'' means to import into the customs territory of the United States.

(13) ''manufacture'' (except under section 32902(d) of this title) means to produce or assemble in the customs territory of the United States or to import.

(14) ''manufacturer'' means—
(A) a person engaged in the business of manufacturing automobiles, including a predecessor or successor of the person to the extent provided under regulations prescribed by the Secretary; and
(B) if more than one person is the manufacturer of an automobile, the person specified under regulations prescribed by the Secretary.

(15) ''model'' means a class of automobiles as decided by regulation by the Administrator after consulting and coordinating with the Secretary.

(16) ''model year'', when referring to a specific calendar year, means—
(A) the annual production period of a manufacturer, as decided by the Administrator, that includes January 1 of that calendar year; or
(B) that calendar year if the manufacturer does not have an annual production period.

(17) ''non-passenger automobile'' means an automobile that is not a passenger automobile or a work truck.

(18) ''passenger automobile'' means an automobile that the Secretary decides by regulation is manufactured primarily for transporting not more than 10 individuals, but does not include an automobile capable of off-highway operation that the Secretary decides by regulation—
(A) has a significant feature (except 4-wheel drive) designed for off-highway operation; and
(B) is a 4-wheel drive automobile or is rated at more than 6,000 pounds gross vehicle weight.

(19) ''work truck'' means a vehicle that—
(A) is rated at between 8,500 and 10,000 pounds gross vehicle weight; and
(B) is not a medium-duty passenger vehicle (as defined in section 86.1803–01 of title 40,

Code of Federal Regulations, as in effect on the date of the enactment of the Ten-in-Ten Fuel Economy Act).

(b) AUTHORITY TO CHANGE PERCENTAGE.—The Secretary may prescribe regulations changing the percentage referred to in subsection (a)(1)(D) of this section to not less than 70 percent because of requirements relating to cold start, safety, or vehicle functions.

(c) MINIMUM DRIVING RANGES FOR DUAL FUELED PASSENGER AUTOMOBILES.—(1) The Secretary shall prescribe by regulation the minimum driving range that dual fueled automobiles that are passenger automobiles must meet when operating on alternative fuel to be dual fueled automobiles under sections 32905 and 32906 of this title. A determination whether a dual fueled automobile meets the minimum driving range requirement under this paragraph shall be based on the combined Agency city/highway fuel economy as determined for average fuel economy purposes for those automobiles.

(2)(A) The Secretary may prescribe a lower range for a specific model than that prescribed under paragraph (1) of this subsection. A manufacturer may petition for a lower range than that prescribed under paragraph (1) for a specific model.

(B) The minimum driving range prescribed for dual fueled automobiles (except electric automobiles) under subparagraph (A) of this paragraph or paragraph (1) of this subsection must be at least 200 miles, except that beginning with model year 2016, alternative fueled automobiles that use a fuel described in subparagraph (E) of subsection (a)(1) shall have a minimum driving range of 150 miles.

(C) If the Secretary prescribes a minimum driving range of 200 miles for dual fueled automobiles (except electric automobiles) under paragraph (1) of this subsection, subparagraph (A) of this paragraph does not apply to dual fueled automobiles (except electric automobiles). Beginning with model year 2016, if the Secretary prescribes a minimum driving range of 150 miles for alternative fueled automobiles that use a fuel described in subparagraph (E) of subsection (a)(1), subparagraph (A) shall not apply to dual fueled automobiles (except electric automobiles).

(3) In prescribing a minimum driving range under paragraph (1) of this subsection and in taking an action under paragraph (2) of this subsection, the Secretary shall consider the purpose set forth in section 3 of the Alternative Motor Fuels Act of 1988 (Public Law 100–494, 102 Stat. 2442), consumer acceptability, economic practicability, technology, environmental impact, safety, drivability, performance, and other factors the Secretary considers relevant.

(Pub. L. 103–272, § 1(e), July 5, 1994, 108 Stat. 1056; Pub. L. 110–140, title I, § 103(a), Dec. 19, 2007, 121 Stat. 1501; Pub. L. 113–291, div. A, title III, § 318(b), Dec. 19, 2014, 128 Stat. 3341.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
32901(a)(1) ...	15:2013(h)(1)(A) (less words in 1st parentheses).	Oct. 20, 1972, Pub. L. 92–513, 86 Stat. 947, § 513(h); added Oct. 14, 1988, Pub. L. 100–494, § 6(a), 102 Stat. 2450; Oct. 24, 1992, Pub. L. 102–486, § 403(5)(H), (I), 106 Stat. 2878.
32901(a)(2) ...	15:2013(h)(1)(B).	
32901(a)(3) ...	15:2001(1).	Oct. 20, 1972, Pub. L. 92–513, 86 Stat. 947, § 501(1); added Dec. 22, 1975, Pub. L. 94–163, § 301, 89 Stat. 901; Oct. 14, 1988, Pub. L. 100–494, § 6(b), 102 Stat. 2452; Oct. 24, 1992, Pub. L. 102–486, § 403(1), 106 Stat. 2876.
	15:2001(13), (14).	Oct. 20, 1972, Pub. L. 92–513, 86 Stat. 947, §§ 501(2)–(7), (10)–(14), 503(c); added Dec. 22, 1975, Pub. L. 94–163, § 301, 89 Stat. 901, 902, 907.
32901(a)(4) ...	15:2003(c).	
32901(a)(5) ...	15:2001(4).	
32901(a)(6) ...	15:2001(7).	
32901(a)(7) ...	15:2013(h)(1)(C).	
32901(a)(8) ...	15:2001(h)(1)(D).	
32901(a)(9) ...	15:2001(5).	
32901(a)(10) ..	15:2001(6).	
32901(a)(11) ..	15:2001(10).	
32901(a)(12) ..	15:2001(9).	Oct. 20, 1972, Pub. L. 92–513, 86 Stat. 947, § 501(8), (9); added Dec. 22, 1975, Pub. L. 94–163, § 301, 89 Stat. 902; Oct. 10, 1980, Pub. L. 96–425, §§ 4(c)(1), 8(b), 94 Stat. 1824, 1828.
32901(a)(13) ..	15:2001(8).	
32901(a)(14) ..	15:2001(11).	
32901(a)(15) ..	15:2001(12).	
32901(a)(16) ..	15:2001(2), (3).	
32901(b)	15:2013(h)(1)(A) (words in 1st parentheses).	
32901(c)(1) ...	15:2013(h)(2)(A).	
32901(c)(2) ...	15:2013(h)(2)(B), (C).	
32901(c)(3) ...	15:2013(h)(2)(D).	

In this chapter, the word ''model'' is substituted for ''model type'' for consistency in this part.

In subsection (a)(3), before clause (A), the words ''except as provided in section 32908 of this title'' are added for clarity. The word ''line'' is added for consistency in the revised title and with other titles of the United States Code. The words ''or rails'' are omitted because of 1:1. The text of 15:2001(1) (last sentence) is omitted because of 49:322(a). The text of 15:2001(13) and (14) is omitted as surplus because the complete names of the Secretary of Transportation and Administrator of the Environmental Protection Agency are used the first time the terms appear in a section. The text of 15:2001 (related to 15:2011) is omitted because 15:2011 is outside the scope of the restatement. See section 4(c) of the bill.

In subsection (a)(4), the words ''‘automobile manufactured by a manufacturer' includes'' are substituted for ''Any reference in this subchapter to automobiles manufactured by a manufacturer shall be deemed—(1) to include'' to eliminate unnecessary words. The word ''every'' is substituted for ''all'' because of the restatement. The words ''but does not include'' are substituted for ''to exclude'' for consistency. The words ''manufactured by the person'' are substituted for ''manufactured (within the meaning of paragraph (1))'' to eliminate unnecessary words.

In subsection (a)(10), the words ''in accordance with procedures established'' are omitted as surplus.

In subsection (a)(14), the word ''particular'' is omitted as surplus.

Subsection (a)(15)(B) is substituted for ''If a manufacturer has no annual production period, the term 'model year' means the calendar year'' to eliminate unnecessary words.

In subsection (a)(16), before clause (A), the words ''but does not include an automobile capable of off-highway operation that'' are substituted for ''(other than an automobile capable of off-highway operation)''

and ''The term 'automobile capable of off-highway operation' means any automobile which'' to eliminate unnecessary words.

In subsection (b), the words ''The Secretary may prescribe regulations changing the percentage . . . to not less than 70 percent because of'' are substituted for ''but not less than 70 percent, as determined by the Secretary, by rule, to provide for'' for clarity and because of the restatement.

In subsection (c)(1), the words ''For purposes of the definitions in paragraph (1)(D)'' are omitted as unnecessary because of the restatement. The words ''within 18 months after October 14, 1988'' are omitted as obsolete. The words ''prescribe by regulation'' are substituted for ''establish by rule of general applicability'' for clarity and consistency in the revised title and with other titles of the United States Code and because ''rule'' is synonymous with ''regulation''. The words ''that are passenger automobiles'' are substituted for ''The rule issued under this subparagraph shall apply only to dual fueled automobiles that are passenger automobiles'' to eliminate unnecessary words.

Editorial Notes

REFERENCES IN TEXT

The date of the enactment of the Ten-in-Ten Fuel Economy Act, referred to in subsec. (a)(19)(B), is the date of enactment of subtitle A (§§ 101–113) of title I of Pub. L. 110–140, which was approved Dec. 19, 2007.

Section 3 of the Alternative Motor Fuels Act of 1988, referred to in subsec. (c)(3), is section 3 of Pub. L. 100–494, which is set out as a note under section 6374 of Title 42, The Public Health and Welfare.

AMENDMENTS

2014—Subsec. (c)(2)(B). Pub. L. 113–291, § 318(b)(1), inserted '', except that beginning with model year 2016, alternative fueled automobiles that use a fuel described in subparagraph (E) of subsection (a)(1) shall have a minimum driving range of 150 miles'' after ''at least 200 miles''.

Subsec. (c)(2)(C). Pub. L. 113–291, § 318(b)(2), inserted at end ''Beginning with model year 2016, if the Secretary prescribes a minimum driving range of 150 miles for alternative fueled automobiles that use a fuel described in subparagraph (E) of subsection (a)(1), subparagraph (A) shall not apply to dual fueled automobiles (except electric automobiles).''

2007—Subsec. (a)(3). Pub. L. 110–140, § 103(a)(1), added par. (3) and struck out former par. (3) which read as follows: ''except as provided in section 32908 of this title, 'automobile' means a 4-wheeled vehicle that is propelled by fuel, or by alternative fuel, manufactured primarily for use on public streets, roads, and highways (except a vehicle operated only on a rail line), and rated at—

''(A) not more than 6,000 pounds gross vehicle weight; or

''(B) more than 6,000, but less than 10,000, pounds gross vehicle weight, if the Secretary decides by regulation that—

''(i) an average fuel economy standard under this chapter for the vehicle is feasible; and

''(ii) an average fuel economy standard under this chapter for the vehicle will result in significant energy conservation or the vehicle is substantially used for the same purposes as a vehicle rated at not more than 6,000 pounds gross vehicle weight.''

Subsec. (a)(7), (8). Pub. L. 110–140, § 103(a)(2), (3), added par. (7) and redesignated former par. (7) as (8). Former par. (8) redesignated (9).

Subsec. (a)(9). Pub. L. 110–140, § 103(a)(2), redesignated par. (8) as (9). Former par. (9) redesignated (10).

Subsec. (a)(9)(A). Pub. L. 110–140, § 103(a)(4), inserted ''or a mixture of biodiesel and diesel fuel meeting the standard established by the American Society for Testing and Materials or under section 211(u) of the Clean Air Act (42 U.S.C. 7545(u)) for fuel containing 20 percent biodiesel (commonly known as 'B20')'' after ''alternative fuel''.

Subsec. (a)(10) to (16). Pub. L. 110–140, § 103(a)(2), redesignated pars. (9) to (15) as (10) to (16), respectively. Former par. (16) redesignated (17).

Subsec. (a)(17). Pub. L. 110–140, § 103(a)(6), added par. (17). Former par. (17) redesignated (18).

Pub. L. 110–140, § 103(a)(2), redesignated par. (16) as (17).

Subsec. (a)(18). Pub. L. 110–140, § 103(a)(5), redesignated par. (17) as (18).

Subsec. (a)(19). Pub. L. 110–140, § 103(a)(7), added par. (19).

Statutory Notes and Related Subsidiaries

EFFECTIVE DATE OF 2007 AMENDMENT

Amendment by Pub. L. 110–140 effective on the date that is 1 day after Dec. 19, 2007, see section 1601 of Pub. L. 110–140, set out as an Effective Date note under section 1824 of Title 2, The Congress.

CONSUMER ASSISTANCE TO RECYCLE AND SAVE

Pub. L. 111–32, title XIII, June 24, 2009, 123 Stat. 1909, as amended by Pub. L. 111–47, Aug. 7, 2009, 123 Stat. 1972, provided that:

''SEC. 1301. SHORT TITLE.—This title may be cited as the 'Consumer Assistance to Recycle and Save Act of 2009'.

''SEC. 1302. CONSUMER ASSISTANCE TO RECYCLE AND SAVE PROGRAM.—(a) ESTABLISHMENT.—There is established in the National Highway Traffic Safety Administration a voluntary program to be known as the 'Consumer Assistance to Recycle and Save Program' through which the Secretary, in accordance with this section and the regulations promulgated under subsection (d), shall—

''(1) authorize the issuance of an electronic voucher, subject to the specifications set forth in subsection (c), to offset the purchase price or lease price for a qualifying lease of a new fuel efficient automobile upon the surrender of an eligible trade-in vehicle to a dealer participating in the Program;

''(2) register dealers for participation in the Program and require that all registered dealers—

''(A) accept vouchers as provided in this section as partial payment or down payment for the purchase or qualifying lease of any new fuel efficient automobile offered for sale or lease by that dealer; and

''(B) in accordance with subsection (c)(2), to transfer each eligible trade-in vehicle surrendered to the dealer under the Program to an entity for disposal;

''(3) in consultation with the Secretary of the Treasury, make electronic payments to dealers for eligible transactions by such dealers, in accordance with the regulations issued under subsection (d); and

''(4) in consultation with the Secretary of the Treasury and the Inspector General of the Department of Transportation, establish and provide for the enforcement of measures to prevent and penalize fraud under the program.

''(b) QUALIFICATIONS FOR AND VALUE OF VOUCHERS.—A voucher issued under the Program shall have a value that may be applied to offset the purchase price or lease price for a qualifying lease of a new fuel efficient automobile as follows:

''(1) $3,500 VALUE.—The voucher may be used to offset the purchase price or lease price of the new fuel efficient automobile by $3,500 if—

''(A) the new fuel efficient automobile is a passenger automobile and the combined fuel economy value of such automobile is at least 4 miles per gallon higher than the combined fuel economy value of the eligible trade-in vehicle;

''(B) the new fuel efficient automobile is a category 1 truck and the combined fuel economy value of such truck is at least 2 miles per gallon higher

than the combined fuel economy value of the eligible trade-in vehicle;

''(C) the new fuel efficient automobile is a category 2 truck that has a combined fuel economy value of at least 15 miles per gallon and—

''(i) the eligible trade-in vehicle is a category 2 truck and the combined fuel economy value of the new fuel efficient automobile is at least 1 mile per gallon higher than the combined fuel economy value of the eligible trade-in vehicle; or

''(ii) the eligible trade-in vehicle is a category 3 truck of model year 2001 or earlier; or

''(D) the new fuel efficient automobile is a category 3 truck and the eligible trade-in vehicle is a category 3 truck of model year of 2001 or earlier and is of similar size or larger than the new fuel efficient automobile as determined in a manner prescribed by the Secretary.

''(2) $4,500 VALUE.—The voucher may be used to offset the purchase price or lease price of the new fuel efficient automobile by $4,500 if—

''(A) the new fuel efficient automobile is a passenger automobile and the combined fuel economy value of such automobile is at least 10 miles per gallon higher than the combined fuel economy value of the eligible trade-in vehicle;

''(B) the new fuel efficient automobile is a category 1 truck and the combined fuel economy value of such truck is at least 5 miles per gallon higher than the combined fuel economy value of the eligible trade-in vehicle; or

''(C) the new fuel efficient automobile is a category 2 truck that has a combined fuel economy value of at least 15 miles per gallon and the combined fuel economy value of such truck is at least 2 miles per gallon higher than the combined fuel economy value of the eligible trade-in vehicle and the eligible trade-in vehicle is a category 2 truck.

''(c) PROGRAM SPECIFICATIONS.—

''(1) LIMITATIONS.—

''(A) GENERAL PERIOD OF ELIGIBILITY.—A voucher issued under the Program shall be used only in connection with the purchase or qualifying lease of new fuel efficient automobiles that occur between July 1, 2009 and November 1, 2009.

''(B) NUMBER OF VOUCHERS PER PERSON AND PER TRADE-IN VEHICLE.—Not more than 1 voucher may be issued for a single person and not more than 1 voucher may be issued for the joint registered owners of a single eligible trade-in vehicle.

''(C) NO COMBINATION OF VOUCHERS.—Only 1 voucher issued under the Program may be applied toward the purchase or qualifying lease of a single new fuel efficient automobile.

''(D) CAP ON FUNDS FOR CATEGORY 3 TRUCKS.—Not more than 7.5 percent of the total funds made available for the Program shall be used for vouchers for the purchase or qualifying lease of category 3 trucks.

''(E) COMBINATION WITH OTHER INCENTIVES PERMITTED.—The availability or use of a Federal, State, or local incentive or a State-issued voucher for the purchase or lease of a new fuel efficient automobile shall not limit the value or issuance of a voucher under the Program to any person otherwise eligible to receive such a voucher.

''(F) NO ADDITIONAL FEES.—A dealer participating in the program may not charge a person purchasing or leasing a new fuel efficient automobile any additional fees associated with the use of a voucher under the Program.

''(G) NUMBER AND AMOUNT.—The total number and value of vouchers issued under the Program may not exceed the amounts appropriated for such purpose.

''(2) DISPOSITION OF ELIGIBLE TRADE-IN VEHICLES.—

''(A) IN GENERAL.—For each eligible trade-in vehicle surrendered to a dealer under the Program, the dealer shall certify to the Secretary, in such manner as the Secretary shall prescribe by rule, that the dealer—

''(i) has not and will not sell, lease, exchange, or otherwise dispose of the vehicle for use as an automobile in the United States or in any other country; and

''(ii) will transfer the vehicle (including the engine block), in such manner as the Secretary prescribes, to an entity that will ensure that the vehicle—

''(I) will be crushed or shredded within such period and in such manner as the Secretary prescribes; and

''(II) has not been, and will not be, sold, leased, exchanged, or otherwise disposed of for use as an automobile in the United States or in any other country.

''(B) SAVINGS PROVISION.—Nothing in subparagraph (A) may be construed to preclude a person who is responsible for ensuring that the vehicle is crushed or shredded from—

''(i) selling any parts of the disposed vehicle other than the engine block and drive train (unless with respect to the drive train, the transmission, drive shaft, or rear end are sold as separate parts); or

''(ii) retaining the proceeds from such sale.

''(C) COORDINATION.—The Secretary shall coordinate with the Attorney General to ensure that the National Motor Vehicle Title Information System and other publicly accessible systems are appropriately updated on a timely basis to reflect the crushing or shredding of vehicles under this section and appropriate reclassification of the vehicles' titles. The commercial market shall also have electronic and commercial access to the vehicle identification numbers of vehicles that have been disposed of on a timely basis.

''(d) REGULATIONS.—Notwithstanding the requirements of section 553 of title 5, United States Code, the Secretary shall promulgate final regulations to implement the Program not later than 30 days after the date of the enactment of this Act [June 24, 2009]. Such regulations shall—

''(1) provide for a means of registering dealers for participation in the Program;

''(2) establish procedures for the reimbursement of dealers participating in the Program to be made through electronic transfer of funds for the amount of the vouchers as soon as practicable but no longer than 10 days after the submission of information supporting the eligible transaction, as deemed appropriate by the Secretary;

''(3) require the dealer to use the voucher in addition to any other rebate or discount advertised by the dealer or offered by the manufacturer for the new fuel efficient automobile and prohibit the dealer from using the voucher to offset any such other rebate or discount;

''(4) require dealers to disclose to the person trading in an eligible trade-in vehicle the best estimate of the scrappage value of such vehicle and to permit the dealer to retain $50 of any amounts paid to the dealer for scrappage of the automobile as payment for any administrative costs to the dealer associated with participation in the Program;

''(5) consistent with subsection (c)(2), establish requirements and procedures for the disposal of eligible trade-in vehicles and provide such information as may be necessary to entities engaged in such disposal to ensure that such vehicles are disposed of in accordance with such requirements and procedures, including—

''(A) requirements for the removal and appropriate disposition of refrigerants, antifreeze, lead products, mercury switches, and such other toxic or hazardous vehicle components prior to the crushing or shredding of an eligible trade-in vehicle, in accordance with rules established by the Secretary in consultation with the Administrator of the Environmental Protection Agency, and in accordance with other applicable Federal or State requirements;

''(B) a mechanism for dealers to certify to the Secretary that each eligible trade-in vehicle will be transferred to an entity that will ensure that the vehicle is disposed of, in accordance with such requirements and procedures, and to submit the vehicle identification numbers of the vehicles disposed of and the new fuel efficient automobile purchased with each voucher;

''(C) a mechanism for obtaining such other certifications as deemed necessary by the Secretary from entities engaged in vehicle disposal; and

''(D) a list of entities to which dealers may transfer eligible trade-in vehicles for disposal; and

''(6) provide for the enforcement of the penalties described in subsection (e).

''(e) ANTI-FRAUD PROVISIONS.—

''(1) VIOLATION.—It shall be unlawful for any person to violate any provision under this section or any regulations issued pursuant to subsection (d) (other than by making a clerical error).

''(2) PENALTIES.—Any person who commits a violation described in paragraph (1) shall be liable to the United States Government for a civil penalty of not more than $15,000 for each violation. The Secretary shall have the authority to assess and compromise such penalties, and shall have the authority to require from any entity the records and inspections necessary to enforce this program. In determining the amount of the civil penalty, the severity of the violation and the intent and history of the person committing the violation shall be taken into account.

''(f) INFORMATION TO CONSUMERS AND DEALERS.—Not later than 30 days after the date of the enactment of this Act [June 24, 2009], and promptly upon the update of any relevant information, the Secretary, in consultation with the Administrator of the Environmental Protection Agency, shall make available on an Internet website and through other means determined by the Secretary information about the Program, including—

''(1) how to determine if a vehicle is an eligible trade-in vehicle;

''(2) how to participate in the Program, including how to determine participating dealers; and

''(3) a comprehensive list, by make and model, of new fuel efficient automobiles meeting the requirements of the Program.

Once such information is available, the Secretary shall conduct a public awareness campaign to inform consumers about the Program and where to obtain additional information.

''(g) RECORD KEEPING AND REPORT.—

''(1) DATABASE.—The Secretary shall maintain a database of the vehicle identification numbers of all new fuel efficient vehicles purchased or leased and all eligible trade-in vehicles disposed of under the Program.

''(2) REPORT ON EFFICACY OF THE PROGRAM.—Not later than 60 days after the termination date described in subsection (c)(1)(A), the Secretary shall submit a report to the Committee on Energy and Commerce of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate describing the efficacy of the Program, including—

''(A) a description of Program results, including—

''(i) the total number and amount of vouchers issued for purchase or lease of new fuel efficient automobiles by manufacturer (including aggregate information concerning the make, model, model year) and category of automobile;

''(ii) aggregate information regarding the make, model, model year, and manufacturing location of vehicles traded in under the Program; and

''(iii) the location of sale or lease;

''(B) an estimate of the overall increase in fuel efficiency in terms of miles per gallon, total annual oil savings, and total annual greenhouse gas reductions, as a result of the Program; and

''(C) an estimate of the overall economic and employment effects of the Program.

''(3) REVIEW OF ADMINISTRATION OF THE PROGRAM BY GOVERNMENT ACCOUNTABILITY OFFICE AND INSPECTOR GENERAL.—Not later than 180 days after the termination date described in subsection (c)(1)(A), the Government Accountability Office and the Inspector General of the Department of Transportation shall submit reports to the Committee on Energy and Commerce of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate reviewing the administration of the program.

''(h) EXCLUSION OF VOUCHERS FROM INCOME.—

''(1) FOR PURPOSES OF ALL FEDERAL AND STATE PROGRAMS.—A voucher issued under this program or any payment made for such a voucher pursuant to subsection (a)(3) shall not be regarded as income and shall not be regarded as a resource for the month of receipt of the voucher and the following 12 months, for purposes of determining the eligibility of the recipient of the voucher (or the recipient's spouse or other family or household members) for benefits or assistance, or the amount or extent of benefits or assistance, under any Federal or State program.

''(2) FOR PURPOSES OF TAXATION.—A voucher issued under the program or any payment made for such a voucher pursuant to subsection (a)(3) shall not be considered as gross income of the purchaser of a vehicle for purposes of the Internal Revenue Code of 1986 [26 U.S.C. 1 et seq.].

''(i) DEFINITIONS.—As used in this section—

''(1) the term 'passenger automobile' means a passenger automobile, as defined in section 32901(a)(18) of title 49, United States Code, that has a combined fuel economy value of at least 22 miles per gallon;

''(2) the term 'category 1 truck' means a nonpassenger automobile, as defined in section 32901(a)(17) of title 49, United States Code, that has a combined fuel economy value of at least 18 miles per gallon, except that such term does not include a category 2 truck;

''(3) the term 'category 2 truck' means a large van or a large pickup, as categorized by the Secretary using the method used by the Environmental Protection Agency and described in the report entitled 'Light-Duty Automotive Technology and Fuel Economy Trends: 1975 through 2008';

''(4) the term 'category 3 truck' means a work truck, as defined in section 32901(a)(19) of title 49, United States Code;

''(5) the term 'combined fuel economy value' means—

''(A) with respect to a new fuel efficient automobile, the number, expressed in miles per gallon, centered below the words 'Combined Fuel Economy' on the label required to be affixed or caused to be affixed on a new automobile pursuant to subpart D of part 600 of title 40, Code of Federal Regulations;

''(B) with respect to an eligible trade-in vehicle, the equivalent of the number described in subparagraph (A), and posted under the words 'Estimated New EPA MPG' and above the word 'Combined' for vehicles of model year 1984 through 2007, or posted under the words 'New EPA MPG' and above the word 'Combined' for vehicles of model year 2008 or later on the fueleconomy.gov website of the Environmental Protection Agency for the make, model, and year of such vehicle; or

''(C) with respect to an eligible trade-in vehicle manufactured between model years 1978 through 1985, the equivalent of the number described in subparagraph (A) as determined by the Secretary (and posted on the website of the National Highway Traffic Safety Administration) using data maintained by the Environmental Protection Agency for the make, model, and year of such vehicle.

''(6) the term 'dealer' means a person licensed by a State who engages in the sale of new automobiles to ultimate purchasers;

''(7) the term 'eligible trade-in vehicle' means an automobile or a work truck (as such terms are defined in section 32901(a) of title 49, United States

Code) that, at the time it is presented for trade-in under this section—

''(A) is in drivable condition;

''(B) has been continuously insured consistent with the applicable State law and registered to the same owner for a period of not less than 1 year immediately prior to such trade-in;

''(C) was manufactured less than 25 years before the date of the trade-in; and

''(D) in the case of an automobile, has a combined fuel economy value of 18 miles per gallon or less;

''(8) the term 'new fuel efficient automobile' means an automobile described in paragraph (1), (2), (3), or (4)—

''(A) the equitable or legal title of which has not been transferred to any person other than the ultimate purchaser;

''(B) that carries a manufacturer's suggested retail price of $45,000 or less;

''(C) that—

''(i) in the case of passenger automobiles, category 1 trucks, or category 2 trucks, is certified to applicable standards under section 86.1811–04 of title 40, Code of Federal Regulations; or

''(ii) in the case of category 3 trucks, is certified to the applicable vehicle or engine standards under section 86.1816–08, 86–007–11 [probably means 86.007–11], or 86.008–10 of title 40, Code of Federal Regulations; and

''(D) that has the combined fuel economy value of at least—

''(i) 22 miles per gallon for a passenger automobile;

''(ii) 18 miles per gallon for a category 1 truck; or

''(iii) 15 miles per gallon for a category 2 truck;

''(9) the term 'Program' means the Consumer Assistance to Recycle and Save Program established by this section;

''(10) the term 'qualifying lease' means a lease of an automobile for a period of not less than 5 years;

''(11) the term 'scrappage value' means the amount received by the dealer for a vehicle upon transferring title of such vehicle to the person responsible for ensuring the dismantling and destroying of the vehicle;

''(12) the term 'Secretary' means the Secretary of Transportation acting through the National Highway Traffic Safety Administration;

''(13) the term 'ultimate purchaser' means, with respect to any new automobile, the first person who in good faith purchases such automobile for purposes other than resale;

''(14) the term 'vehicle identification number' means the 17 character number used by the automobile industry to identify individual automobiles; and

''(15) the term 'voucher' means an electronic transfer of funds to a dealer based on an eligible transaction under this program.

''(j) APPROPRIATION.—There is hereby appropriated to the Secretary of Transportation $1,000,000,000, of which up to $50,000,000 is available for administration, to remain available until expended to carry out this section.''

§ 32902. Average fuel economy standards

(a) PRESCRIPTION OF STANDARDS BY REGULATION.—At least 18 months before the beginning of each model year, the Secretary of Transportation shall prescribe by regulation average fuel economy standards for automobiles manufactured by a manufacturer in that model year. Each standard shall be the maximum feasible average fuel economy level that the Secretary decides the manufacturers can achieve in that model year.

(b) STANDARDS FOR AUTOMOBILES AND CERTAIN OTHER VEHICLES.—

(1) IN GENERAL.—The Secretary of Transportation, after consultation with the Secretary of Energy and the Administrator of the Environmental Protection Agency, shall prescribe separate average fuel economy standards for—

(A) passenger automobiles manufactured by manufacturers in each model year beginning with model year 2011 in accordance with this subsection;

(B) non-passenger automobiles manufactured by manufacturers in each model year beginning with model year 2011 in accordance with this subsection; and

(C) work trucks and commercial medium-duty or heavy-duty on-highway vehicles in accordance with subsection (k).

(2) FUEL ECONOMY STANDARDS FOR AUTOMOBILES.—

(A) AUTOMOBILE FUEL ECONOMY AVERAGE FOR MODEL YEARS 2011 THROUGH 2020.—The Secretary shall prescribe a separate average fuel economy standard for passenger automobiles and a separate average fuel economy standard for non-passenger automobiles for each model year beginning with model year 2011 to achieve a combined fuel economy average for model year 2020 of at least 35 miles per gallon for the total fleet of passenger and non-passenger automobiles manufactured for sale in the United States for that model year.

(B) AUTOMOBILE FUEL ECONOMY AVERAGE FOR MODEL YEARS 2021 THROUGH 2030.—For model years 2021 through 2030, the average fuel economy required to be attained by each fleet of passenger and non-passenger automobiles manufactured for sale in the United States shall be the maximum feasible average fuel economy standard for each fleet for that model year.

(C) PROGRESS TOWARD STANDARD REQUIRED.—In prescribing average fuel economy standards under subparagraph (A), the Secretary shall prescribe annual fuel economy standard increases that increase the applicable average fuel economy standard ratably beginning with model year 2011 and ending with model year 2020.

(3) AUTHORITY OF THE SECRETARY.—The Secretary shall—

(A) prescribe by regulation separate average fuel economy standards for passenger and non-passenger automobiles based on 1 or more vehicle attributes related to fuel economy and express each standard in the form of a mathematical function; and

(B) issue regulations under this title prescribing average fuel economy standards for at least 1, but not more than 5, model years.

(4) MINIMUM STANDARD.—In addition to any standard prescribed pursuant to paragraph (3), each manufacturer shall also meet the minimum standard for domestically manufactured passenger automobiles, which shall be the greater of—

(A) 27.5 miles per gallon; or

(B) 92 percent of the average fuel economy projected by the Secretary for the combined domestic and non-domestic passenger automobile fleets manufactured for sale in the

United States by all manufacturers in the model year, which projection shall be published in the Federal Register when the standard for that model year is promulgated in accordance with this section.

(c) AMENDING PASSENGER AUTOMOBILE STANDARDS.—The Secretary of Transportation may prescribe regulations amending the standard under subsection (b) of this section for a model year to a level that the Secretary decides is the maximum feasible average fuel economy level for that model year. Section 553 of title 5 applies to a proceeding to amend the standard. However, any interested person may make an oral presentation and a transcript shall be taken of that presentation.

(d) EXEMPTIONS.—(1) Except as provided in paragraph (3) of this subsection, on application of a manufacturer that manufactured (whether in the United States or not) fewer than 10,000 passenger automobiles in the model year 2 years before the model year for which the application is made, the Secretary of Transportation may exempt by regulation the manufacturer from a standard under subsection (b) or (c) of this section. An exemption for a model year applies only if the manufacturer manufactures (whether in the United States or not) fewer than 10,000 passenger automobiles in the model year. The Secretary may exempt a manufacturer only if the Secretary—

(A) finds that the applicable standard under those subsections is more stringent than the maximum feasible average fuel economy level that the manufacturer can achieve; and

(B) prescribes by regulation an alternative average fuel economy standard for the passenger automobiles manufactured by the exempted manufacturer that the Secretary decides is the maximum feasible average fuel economy level for the manufacturers to which the alternative standard applies.

(2) An alternative average fuel economy standard the Secretary of Transportation prescribes under paragraph (1)(B) of this subsection may apply to an individually exempted manufacturer, to all automobiles to which this subsection applies, or to classes of passenger automobiles, as defined under regulations of the Secretary, manufactured by exempted manufacturers.

(3) Notwithstanding paragraph (1) of this subsection, an importer registered under section 30141(c) of this title may not be exempted as a manufacturer under paragraph (1) for a motor vehicle that the importer—

(A) imports; or

(B) brings into compliance with applicable motor vehicle safety standards prescribed under chapter 301 of this title for an individual under section 30142 of this title.

(4) The Secretary of Transportation may prescribe the contents of an application for an exemption.

(e) EMERGENCY VEHICLES.—(1) In this subsection, ''emergency vehicle'' means an automobile manufactured primarily for use—

(A) as an ambulance or combination ambulance-hearse;

(B) by the United States Government or a State or local government for law enforcement; or

(C) for other emergency uses prescribed by regulation by the Secretary of Transportation.

(2) A manufacturer may elect to have the fuel economy of an emergency vehicle excluded in applying a fuel economy standard under subsection (a), (b), (c), or (d) of this section. The election is made by providing written notice to the Secretary of Transportation and to the Administrator of the Environmental Protection Agency.

(f) CONSIDERATIONS ON DECISIONS ON MAXIMUM FEASIBLE AVERAGE FUEL ECONOMY.—When deciding maximum feasible average fuel economy under this section, the Secretary of Transportation shall consider technological feasibility, economic practicability, the effect of other motor vehicle standards of the Government on fuel economy, and the need of the United States to conserve energy.

(g) REQUIREMENTS FOR OTHER AMENDMENTS.—(1) The Secretary of Transportation may prescribe regulations amending an average fuel economy standard prescribed under subsection (a) or (d) of this section if the amended standard meets the requirements of subsection (a) or (d), as appropriate.

(2) When the Secretary of Transportation prescribes an amendment under this section that makes an average fuel economy standard more stringent, the Secretary shall prescribe the amendment (and submit the amendment to Congress when required under subsection (c)(2) of this section) at least 18 months before the beginning of the model year to which the amendment applies.

(h) LIMITATIONS.—In carrying out subsections (c), (f), and (g) of this section, the Secretary of Transportation—

(1) may not consider the fuel economy of dedicated automobiles;

(2) shall consider dual fueled automobiles to be operated only on gasoline or diesel fuel; and

(3) may not consider, when prescribing a fuel economy standard, the trading, transferring, or availability of credits under section 32903.

(i) CONSULTATION.—The Secretary of Transportation shall consult with the Secretary of Energy in carrying out this section and section 32903 of this title.

(j) SECRETARY OF ENERGY COMMENTS.—(1) Before issuing a notice proposing to prescribe or amend an average fuel economy standard under subsection (a), (c), or (g) of this section, the Secretary of Transportation shall give the Secretary of Energy at least 10 days from the receipt of the notice during which the Secretary of Energy may, if the Secretary of Energy concludes that the proposed standard would adversely affect the conservation goals of the Secretary of Energy, provide written comments to the Secretary of Transportation about the impact of the standard on those goals. To the extent the Secretary of Transportation does not revise a proposed standard to take into account comments of the Secretary of Energy on any adverse impact of the standard, the Secretary of Transportation shall include those comments in the notice.

(2) Before taking final action on a standard or an exemption from a standard under this section, the Secretary of Transportation shall notify the Secretary of Energy and provide the Secretary of Energy a reasonable time to comment.

(k) COMMERCIAL MEDIUM- AND HEAVY-DUTY ON-HIGHWAY VEHICLES AND WORK TRUCKS.—

(1) STUDY.—Not later than 1 year after the National Academy of Sciences publishes the results of its study under section 108 of the Ten-in-Ten Fuel Economy Act, the Secretary of Transportation, in consultation with the Secretary of Energy and the Administrator of the Environmental Protection Agency, shall examine the fuel efficiency of commercial medium- and heavy-duty on-highway vehicles and work trucks and determine—

(A) the appropriate test procedures and methodologies for measuring the fuel efficiency of such vehicles and work trucks;

(B) the appropriate metric for measuring and expressing commercial medium- and heavy-duty on-highway vehicle and work truck fuel efficiency performance, taking into consideration, among other things, the work performed by such on-highway vehicles and work trucks and types of operations in which they are used;

(C) the range of factors, including, without limitation, design, functionality, use, duty cycle, infrastructure, and total overall energy consumption and operating costs that affect commercial medium- and heavy-duty on-highway vehicle and work truck fuel efficiency; and

(D) such other factors and conditions that could have an impact on a program to improve commercial medium- and heavy-duty on-highway vehicle and work truck fuel efficiency.

(2) RULEMAKING.—Not later than 24 months after completion of the study required under paragraph (1), the Secretary, in consultation with the Secretary of Energy and the Administrator of the Environmental Protection Agency, by regulation, shall determine in a rulemaking proceeding how to implement a commercial medium- and heavy-duty on-highway vehicle and work truck fuel efficiency improvement program designed to achieve the maximum feasible improvement, and shall adopt and implement appropriate test methods, measurement metrics, fuel economy standards, and compliance and enforcement protocols that are appropriate, cost-effective, and technologically feasible for commercial medium- and heavy-duty on-highway vehicles and work trucks. The Secretary may prescribe separate standards for different classes of vehicles under this subsection.

(3) LEAD-TIME; REGULATORY STABILITY.—The commercial medium- and heavy-duty on-highway vehicle and work truck fuel economy standard adopted pursuant to this subsection shall provide not less than—

(A) 4 full model years of regulatory lead-time; and

(B) 3 full model years of regulatory stability.

(Pub. L. 103–272, § 1(e), July 5, 1994, 108 Stat. 1059; Pub. L. 110–140, title I, §§ 102, 104(b)(1), Dec. 19, 2007, 121 Stat. 1498, 1503.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
32902(a)	15:2002(b).	Oct. 20, 1972, Pub. L. 92–513, 86 Stat. 947, § 502(a)(1), (3)–(c), (e) (1st sentence), (f), (h); added Dec. 22, 1975, Pub. L. 94–163, § 301, 89 Stat. 902, 903, 905; Oct. 10, 1980, Pub. L. 96–425, §§ 3(a)(1), 7, 8(c), 94 Stat. 1821, 1828.
32902(b)	15:2002(a)(1), (3).	
32902(c)(1) ..	15:2002(a)(4) (words before 5th comma), (h).	
32902(c)(2) ..	15:2002(a)(4) (words after 5th comma), (5).	
32902(d)	15:1397 (note).	Oct. 31, 1988, Pub. L. 100–562, § 2(f), 102 Stat. 2825.
	15:2002(c).	
32902(e)	15:2002(g).	Oct. 20, 1972, Pub. L. 92–513, 86 Stat. 947, § 502(g); added Oct. 10, 1980, Pub. L. 96–425, § 7, 94 Stat. 1828.
32902(f)	15:2002(e) (1st sentence).	
32902(g)	15:2002(f).	
32902(h)	15:2002(e) (last sentence).	Oct. 20, 1972, Pub. L. 92–513, 86 Stat. 947, §§ 502(e) (last sentence), 513(g)(2)(B); added Oct. 14, 1988, Pub. L. 100–494, § 6(a), (c), 102 Stat. 2450, 2452; Oct. 24, 1992, Pub. L. 102–486, § 403(2), (5)(G)(ii)(II), (III), 106 Stat. 2876, 2878.
	15:2013(g)(2)(B).	
32902(i)	15:2002(i) (1st sentence).	Oct. 20, 1972, Pub. L. 92–513, 86 Stat. 947, § 502(i), (j); added Aug. 4, 1977, Pub. L. 95–91, § 305, 91 Stat. 580; Oct. 10, 1980, Pub. L. 96–425, § 7, 94 Stat. 1828.
32902(j)	15:2002(i) (2d, last sentences), (j).	

In subsection (a), the words ''Any standard applicable to a model year under this subsection shall be prescribed'' are omitted as surplus. The words ''which begins more than 30 months after December 22, 1975'' are omitted as executed.

In subsection (b), the text of 15:2002(a)(1) (related to model years before 1985) and (3) is omitted as expired. The words ''at least'' are omitted as unnecessary because of the source provisions restated in subsection (c) of this section.

In subsection (c)(1), the words ''Subject to paragraph (2) of this subsection'' are added for clarity. The words ''may prescribe regulations amending'' are substituted for ''may, by rule, amend'' for clarity and consistency in the revised title and because ''rule'' is synonymous with ''regulation''. The words ''for a model year'' are substituted for ''for model year 1985, or for any subsequent model year'' to eliminate the expired limitation. The reference in 15:2002(h) to 15:2002(d) is omitted because 15:2002(d) is omitted from the revised title as executed. The words ''as well as written'' are omitted as surplus.

In subsection (c)(2), the words ''If an amendment increases the standard . . . or decreases the standard'' are substituted for ''except that any amendment that has the effect of increasing . . . a standard . . ., or of decreasing . . . a standard'' to eliminate unnecessary words. The words ''For purposes of considering any modification which is submitted to the Congress under paragraph (4)'' are omitted as surplus. The words ''are deemed to be'' are substituted for ''shall be lengthened to'' for clarity and consistency.

In subsection (d)(1), before clause (A), the words ''Except as provided in paragraph (3) of this subsection'' are added because of the restatement. The words ''in the model year 2 years before'' are substituted for ''in the second model year preceding'' for clarity. The words

''The Secretary may exempt a manufacturer only if the Secretary'' are substituted for ''Such exemption may only be granted if the Secretary'' and ''The Secretary may not issue exemptions with respect to a model year unless he'' to eliminate unnecessary words. The words ''each such standard shall be set at a level which'' are omitted as surplus.

In subsection (d)(3), before clause (A), the words ''Notwithstanding paragraph (1) of this subsection'' are substituted for ''Notwithstanding any provision of law authorizing exemptions from energy conservation requirements for manufacturers of fewer than 10,000 motor vehicles'' to eliminate unnecessary words. In clause (B), the word ''compliance'' is substituted for ''conformity'' for consistency with chapter 301 of the revised title. The words ''prescribed under chapter 301 of this title'' are substituted for ''Federal'' for consistency in the revised title.

Subsection (d)(4) is substituted for 15:2002(c)(1) (2d sentence) to eliminate unnecessary words. The text of 15:2002(c)(2) is omitted as expired.

In subsection (e)(1)(B), the words ''police or other'' are omitted as unnecessary because the authority to prescribe standards includes the authority to amend those standards.

In subsection (g)(1), the words ''from time to time'' are omitted as unnecessary. The cross-reference to 15:2002(a)(3) is omitted as executed because 15:2002(a)(3) applied to model years 1981–1984.

In subsection (g)(2), the words ''that makes'' are substituted for ''has the effect of making'' to eliminate unnecessary words.

In subsection (i), the words ''his responsibilities under'' are omitted as surplus.

In subsection (j), the reference to 15:2002(d) and the words ''or any modification of'' are omitted because 15:2002(d) is omitted from the revised title as executed.

In subsection (j)(1), the words ''to prescribe or amend'' are substituted for ''to establish, reduce, or amend'' to eliminate unnecessary words. The words ''adverse impact'' are substituted for ''level'' for clarity and consistency. The words ''those comments'' are substituted for ''unaccommodated comments'' for clarity.

Editorial Notes

REFERENCES IN TEXT

Section 108 of the Ten-in-Ten Fuel Economy Act, referred to in subsec. (k)(1), is section 108 of Pub. L. 110–140, title I, Dec. 19, 2007, 121 Stat. 1505, which is not classified to the Code.

AMENDMENTS

2007—Subsec. (a). Pub. L. 110–140, §102(a)(1), in heading, substituted ''Prescription of Standards by Regulation'' for ''Non-Passenger Automobiles'', and, in text, struck out ''(except passenger automobiles)'' after ''for automobiles'' and ''The Secretary may prescribe separate standards for different classes of automobiles.'' at end.

Subsec. (b). Pub. L. 110–140, §102(a)(2), added subsec. (b) and struck out former subsec. (b). Prior to amendment, text of subsec. (b) read as follows: ''Except as provided in this section, the average fuel economy standard for passenger automobiles manufactured by a manufacturer in a model year after model year 1984 shall be 27.5 miles a gallon.''

Subsec. (c). Pub. L. 110–140, §102(a)(3), substituted ''The Secretary'' for ''(1) Subject to paragraph (2) of this subsection, the Secretary'' and struck out par. (2) which read as follows: ''If an amendment increases the standard above 27.5 miles a gallon or decreases the standard below 26.0 miles a gallon, the Secretary of Transportation shall submit the amendment to Congress. The procedures of section 551 of the Energy Policy and Conservation Act (42 U.S.C. 6421) apply to an amendment, except that the 15 calendar days referred to in section 551(c) and (d) of the Act (42 U.S.C. 6421(c), (d)) are deemed to be 60 calendar days, and the 5 calendar days referred to in section 551(f)(4)(A) of the Act (42 U.S.C. 6421(f)(4)(A)) are deemed to be 20 calendar days. If either House of Congress disapproves the amendment under those procedures, the amendment does not take effect.''

Subsec. (h)(3). Pub. L. 110–140, §104(b)(1), added par. (3).

Subsec. (k). Pub. L. 110–140, §102(b), added subsec. (k).

Statutory Notes and Related Subsidiaries

EFFECTIVE DATE OF 2007 AMENDMENT

Amendment by Pub. L. 110–140 effective on the date that is 1 day after Dec. 19, 2007, see section 1601 of Pub. L. 110–140, set out as an Effective Date note under section 1824 of Title 2, The Congress.

CONTINUED APPLICABILITY OF EXISTING STANDARDS

Pub. L. 110–140, title I, §106, Dec. 19, 2007, 121 Stat. 1504, provided that: ''Nothing in this subtitle [subtitle A (§§101–113) of title I of Pub. L. 110–140, see Short Title of 2007 Amendment note set out under section 30101 of this title], or the amendments made by this subtitle, shall be construed to affect the application of section 32902 of title 49, United States Code, to passenger automobiles or non-passenger automobiles manufactured before model year 2011.''

NATIONAL ACADEMY OF SCIENCES STUDIES

Pub. L. 110–140, title I, §107, Dec. 19, 2007, 121 Stat. 1504, provided that:

''(a) IN GENERAL.—As soon as practicable after the date of enactment of this Act [Dec. 19, 2007], the Secretary of Transportation shall execute an agreement with the National Academy of Sciences to develop a report evaluating vehicle fuel economy standards, including—

''(1) an assessment of automotive technologies and costs to reflect developments since the Academy's 2002 report evaluating the corporate average fuel economy standards was conducted;

''(2) an analysis of existing and potential technologies that may be used practically to improve automobile and medium-duty and heavy-duty truck fuel economy;

''(3) an analysis of how such technologies may be practically integrated into the automotive and medium-duty and heavy-duty truck manufacturing process; and

''(4) an assessment of how such technologies may be used to meet the new fuel economy standards under chapter 329 of title 49, United States Code, as amended by this subtitle [subtitle A (§§101–113) of title I of Pub. L. 110–140, see Short Title of 2007 Amendment note set out under section 30101 of this title].

''(b) REPORT.—The Academy shall submit the report to the Secretary, the Committee on Commerce, Science, and Transportation of the Senate, and the Committee on Energy and Commerce of the House of Representatives, with its findings and recommendations not later than 5 years after the date on which the Secretary executes the agreement with the Academy.

''(c) QUINQUENNIAL UPDATES.—After submitting the initial report, the Academy shall update the report at 5 year intervals thereafter through 2025.''

Executive Documents

THE ENERGY INDEPENDENCE AND SECURITY ACT OF 2007

Memorandum of President of the United States, Jan. 26, 2009, 74 F.R. 4907, provided:

Memorandum for the Secretary of Transportation [and] the Administrator of the National Highway Traffic Safety Administration

In 2007, the Congress passed the Energy Independence and Security Act (EISA). This law mandates that, as part of the Nation's efforts to achieve energy independence, the Secretary of Transportation prescribe annual

fuel economy increases for automobiles, beginning with model year 2011, resulting in a combined fuel economy fleet average of at least 35 miles per gallon by model year 2020. On May 2, 2008, the National Highway Traffic Safety Administration (NHTSA) published a Notice of Proposed Rulemaking entitled *Average Fuel Economy Standards, Passenger Cars and Light Trucks; Model Years 2011–2015*, *73 Fed. Reg.* 24352. In the notice and comment period, the NHTSA received numerous comments, some of them contending that certain aspects of the proposed rule, including appendices providing for preemption of State laws, were inconsistent with provisions of EISA and the Supreme Court's decision in *Massachusetts v. Environmental Protection Agency*, 549 U.S. 497 (2007).

Federal law requires that the final rule regarding fuel economy standards be adopted at least 18 months before the beginning of the model year (49 U.S.C. 32902(g)(2)). In order for the model year 2011 standards to meet this requirement, the NHTSA must publish the final rule in the Federal Register by March 30, 2009. To date, the NHTSA has not published a final rule.

Therefore, I request that:

(a) in order to comply with the EISA requirement that fuel economy increases begin with model year 2011, you take all measures consistent with law, and in coordination with the Environmental Protection Agency, to publish in the Federal Register by March 30, 2009, a final rule prescribing increased fuel economy for model year 2011;

(b) before promulgating a final rule concerning model years after model year 2011, you consider the appropriate legal factors under the EISA, the comments filed in response to the Notice of Proposed Rulemaking, the relevant technological and scientific considerations, and to the extent feasible, the forthcoming report by the National Academy of Sciences mandated under section 107 of EISA; and

(c) in adopting the final rules in paragraphs (a) and (b) above, you consider whether any provisions regarding preemption are consistent with the EISA, the Supreme Court's decision in *Massachusetts v. EPA* and other relevant provisions of law and the policies underlying them.

This memorandum is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

The Secretary of Transportation is hereby authorized and directed to publish this memorandum in the Federal Register.

BARACK OBAMA.

IMPROVING ENERGY SECURITY, AMERICAN COMPETITIVENESS AND JOB CREATION, AND ENVIRONMENTAL PROTECTION THROUGH A TRANSFORMATION OF OUR NATION'S FLEET OF CARS AND TRUCKS

Memorandum of President of the United States, May 21, 2010, 75 F.R. 29399, provided:

Memorandum for the Secretary of Transportation[,] the Secretary of Energy[,] the Administrator of the Environmental Protection Agency[, and] the Administrator of the National Highway Traffic Safety Administration

America has the opportunity to lead the world in the development of a new generation of clean cars and trucks through innovative technologies and manufacturing that will spur economic growth and create high-quality domestic jobs, enhance our energy security, and improve our environment. We already have made significant strides toward reducing greenhouse gas pollution and enhancing fuel efficiency from motor vehicles with the joint rulemaking issued by the National Highway Traffic Safety Administration (NHTSA) and the Environmental Protection Agency (EPA) on April 1, 2010, which regulates these attributes of passenger cars and light-duty trucks for model years 2012–2016. In this memorandum, I request that additional coordinated steps be taken to produce a new generation of clean vehicles.

SECTION 1. *Medium- and Heavy-Duty Trucks.*

While the Federal Government and many States have now created a harmonized framework for addressing the fuel economy of and greenhouse gas emissions from cars and light-duty trucks, medium- and heavy-duty trucks and buses continue to be a major source of fossil fuel consumption and greenhouse gas pollution. I therefore request that the Administrators of the EPA and the NHTSA immediately begin work on a joint rulemaking under the Clean Air Act (CAA) and the Energy Independence and Security Act of 2007 (EISA) to establish fuel efficiency and greenhouse gas emissions standards for commercial medium- and heavy-duty vehicles beginning with model year 2014, with the aim of issuing a final rule by July 30, 2011. As part of this rule development process, I request that the Administrators of the EPA and the NHTSA:

(a) Propose and take comment on strategies, including those designed to increase the use of existing technologies, to achieve substantial annual progress in reducing transportation sector emissions and fossil fuel consumption consistent with my Administration's overall energy and climate security goals. These strategies should consider whether particular segments of the diverse heavy-duty vehicle sector present special opportunities to reduce greenhouse gas emissions and increase fuel economy. For example, preliminary estimates indicate that large tractor trailers, representing half of all greenhouse gas emissions from this sector, can reduce greenhouse gas emissions by as much as 20 percent and increase their fuel efficiency by as much as 25 percent with the use of existing technologies;

(b) Include fuel efficiency and greenhouse gas emissions standards that take into account the market structure of the trucking industry and the unique demands of heavy-duty vehicle applications; seek harmonization with applicable State standards; consider the findings and recommendations published in the National Academy of Science report on medium- and heavy-duty truck regulation; strengthen the industry and enhance job creation in the United States; and

(c) Seek input from all stakeholders, while recognizing the continued leadership role of California and other States.

SEC. 2. *Passenger Cars and Light-Duty Trucks.*

Building on the earlier joint rulemaking, and in order to provide greater certainty and incentives for long-term innovation by automobile and light-duty vehicle manufacturers, I request that the Administrators of the EPA and the NHTSA develop, through notice and comment rulemaking, a coordinated national program under the CAA and the EISA to improve fuel efficiency and to reduce greenhouse gas emissions of passenger cars and light-duty trucks of model years 2017–2025. The national program should seek to produce joint Federal standards that are harmonized with applicable State standards, with the goal of ensuring that automobile manufacturers will be able to build a single, light-duty national fleet. The program should also seek to achieve substantial annual progress in reducing transportation sector greenhouse gas emissions and fossil fuel consumption, consistent with my Administration's overall energy and climate security goals, through the increased domestic production and use of existing, advanced, and emerging technologies, and should strengthen the industry and enhance job creation in the United States. As part of implementing the national program, I request that the Administrators of the EPA and the NHTSA:

(a) Work with the State of California to develop by September 1, 2010, a technical assessment to inform the rulemaking process, reflecting input from an array of stakeholders on relevant factors, including viable technologies, costs, benefits, lead time to develop and deploy new and emerging technologies, incentives and other flexibilities to encourage development and deployment of new and emerging technologies, impacts on jobs and the automotive manufacturing base in the

United States, and infrastructure for advanced vehicle technologies; and

(b) Take all measures consistent with law to issue by September 30, 2010, a Notice of Intent to Issue a Proposed Rule that announces plans for setting stringent fuel economy and greenhouse gas emissions standards for light-duty vehicles of model year 2017 and beyond, including plans for initiating joint rulemaking and gathering any additional information needed to support regulatory action. The Notice should describe the key elements of the program that the EPA and the NHTSA intend jointly to propose, under their respective statutory authorities, including potential standards that could be practicably implemented nationally for the 2017–2025 model years and a schedule for setting those standards as expeditiously as possible, consistent with providing sufficient lead time to vehicle manufacturers.

SEC. 3. *Cleaner Vehicles and Fuels and Necessary Infrastructure.*

The success of our efforts to achieve enhanced energy security and to protect the environment also depends upon the development of infrastructure and promotion of fuels, including biofuels, which will enable the development and widespread deployment of advanced technologies. Therefore, I further request that:

(a) The Administrator of the EPA review for adequacy the current nongreenhouse gas emissions regulations for new motor vehicles, new motor vehicle engines, and motor vehicle fuels, including tailpipe emissions standards for nitrogen oxides and air toxics, and sulfur standards for gasoline. If the Administrator of the EPA finds that new emissions regulations are required, then I request that the Administrator of the EPA promulgate such regulations as part of a comprehensive approach toward regulating motor vehicles; and [sic]

(b) The Secretary of Energy promote the deployment of advanced technology vehicles by providing technical assistance to cities preparing for deployment of electric vehicles, including plug-in hybrids and all-electric vehicles; and

(c) The Department of Energy work with stakeholders on the development of voluntary standards to facilitate the robust deployment of advanced vehicle technologies and coordinate its efforts with the Department of Transportation, the NHTSA, and the EPA.

SEC. 4. *General Provisions.*

(a) This memorandum shall be implemented consistent with applicable law, including international trade obligations, and subject to the availability of appropriations.

(b) This memorandum is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

(c) Nothing in this memorandum shall be construed to impair or otherwise affect:

(1) authority granted by law to a department, agency, or the head thereof; or

(2) functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

SEC. 5. *Publication.*

The Secretary of Transportation is hereby authorized and directed to publish this memorandum in the Federal Register.

BARACK OBAMA.

§ 32903. Credits for exceeding average fuel economy standards

(a) EARNING AND PERIOD FOR APPLYING CREDITS.—When the average fuel economy of passenger automobiles manufactured by a manufacturer in a particular model year exceeds an applicable average fuel economy standard under subsections (a) through (d) of section 32902 (determined by the Secretary of Transportation without regard to credits under this section), the manufacturer earns credits. The credits may be applied to—

(1) any of the 3 consecutive model years immediately before the model year for which the credits are earned; and

(2) to the extent not used under paragraph (1)[1] any of the 5 consecutive model years immediately after the model year for which the credits are earned.

(b) PERIOD OF AVAILABILITY AND PLAN FOR FUTURE CREDITS.—(1) Except as provided in paragraph (2) of this subsection, credits under this section are available to a manufacturer at the end of the model year in which earned.

(2)(A) Before the end of a model year, if a manufacturer has reason to believe that its average fuel economy for passenger automobiles will be less than the applicable standard for that model year, the manufacturer may submit a plan to the Secretary of Transportation demonstrating that the manufacturer will earn sufficient credits under this section within the next 3 model years to allow the manufacturer to meet that standard for the model year involved. Unless the Secretary finds that the manufacturer is unlikely to earn sufficient credits under the plan, the Secretary shall approve the plan. Those credits are available for the model year involved if—

(i) the Secretary approves the plan; and

(ii) the manufacturer earns those credits as provided by the plan.

(B) If the average fuel economy of a manufacturer is less than the applicable standard under subsections (a) through (d) of section 32902 after applying credits under subsection (a)(1) of this section, the Secretary of Transportation shall notify the manufacturer and give the manufacturer a reasonable time (of at least 60 days) to submit a plan.

(c) DETERMINING NUMBER OF CREDITS.—The number of credits a manufacturer earns under this section equals the product of—

(1) the number of tenths of a mile a gallon by which the average fuel economy of the passenger automobiles manufactured by the manufacturer in the model year in which the credits are earned exceeds the applicable average fuel economy standard under subsections (a) through (d) of section 32902; times

(2) the number of passenger automobiles manufactured by the manufacturer during that model year.

(d) APPLYING CREDITS FOR PASSENGER AUTOMOBILES.—The Secretary of Transportation shall apply credits to a model year on the basis of the number of tenths of a mile a gallon by which the manufacturer involved was below the applicable average fuel economy standard for that model year and the number of passenger automobiles manufactured that model year by the manufacturer. Credits applied to a model year are no longer available for another model year. Before applying credits, the Secretary shall give the manufacturer written notice and reasonable opportunity to comment.

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[1] So in original. Probably should be followed by a comma.

Subsecs. (b)(2)(B), (c)(1). Pub. L. 110–140, §104(a)(1), substituted ''subsections (a) through (d) of section 32902'' for ''section 32902(b)–(d) of this title''.

Subsecs. (f) to (h). Pub. L. 110–140, §104(a)(3), (4), added subsecs. (f) and (g) and redesignated former subsec. (f) as (h).

Statutory Notes and Related Subsidiaries

EFFECTIVE DATE OF 2007 AMENDMENT

Amendment by Pub. L. 110–140 effective on the date that is 1 day after Dec. 19, 2007, see section 1601 of Pub. L. 110–140, set out as an Effective Date note under section 1824 of Title 2, The Congress.

§ 32904. Calculation of average fuel economy

(a) METHOD OF CALCULATION.—(1) The Administrator of the Environmental Protection Agency shall calculate the average fuel economy of a manufacturer subject to—

(A) section 32902(a) of this title in a way prescribed by the Administrator; and

(B) section 32902(b)–(d) of this title by dividing—

(i) the number of passenger automobiles manufactured by the manufacturer in a model year; by

(ii) the sum of the fractions obtained by dividing the number of passenger automobiles of each model manufactured by the manufacturer in that model year by the fuel economy measured for that model.

(2)(A) In this paragraph, ''electric vehicle'' means a vehicle powered primarily by an electric motor drawing electrical current from a portable source.

(B) If a manufacturer manufactures an electric vehicle, the Administrator shall include in the calculation of average fuel economy under paragraph (1) of this subsection equivalent petroleum based fuel economy values determined by the Secretary of Energy for various classes of electric vehicles. The Secretary shall review those values each year and determine and propose necessary revisions based on the following factors:

(i) the approximate electrical energy efficiency of the vehicle, considering the kind of vehicle and the mission and weight of the vehicle.

(ii) the national average electrical generation and transmission efficiencies.

(iii) the need of the United States to conserve all forms of energy and the relative scarcity and value to the United States of all fuel used to generate electricity.

(iv) the specific patterns of use of electric vehicles compared to petroleum-fueled vehicles.

(b) SEPARATE CALCULATIONS FOR PASSENGER AUTOMOBILES MANUFACTURED DOMESTICALLY AND NOT DOMESTICALLY.—(1)(A) Except as provided in paragraphs (6) and (7) of this subsection, the Administrator shall make separate calculations under subsection (a)(1)(B) of this section for—

(i) passenger automobiles manufactured domestically by a manufacturer (or included in this category under paragraph (5) of this subsection); and

(ii) passenger automobiles not manufactured domestically by that manufacturer (or excluded from this category under paragraph (5) of this subsection).

(B) Passenger automobiles described in subparagraph (A)(i) and (ii) of this paragraph are deemed to be manufactured by separate manufacturers under this chapter, except for the purposes of section 32903.

(2) In this subsection (except as provided in paragraph (3)), a passenger automobile is deemed to be manufactured domestically in a model year if at least 75 percent of the cost to the manufacturer is attributable to value added in the United States or Canada, unless the assembly of the automobile is completed in Canada and the automobile is imported into the United States more than 30 days after the end of the model year.

(3)(A) In this subsection, a passenger automobile is deemed to be manufactured domestically in a model year, as provided in subparagraph (B) of this paragraph, if at least 75 percent of the cost to the manufacturer is attributable to value added in the United States, Canada, or Mexico, unless the assembly of the automobile is completed in Canada or Mexico and the automobile is imported into the United States more than 30 days after the end of the model year.

(B) Subparagraph (A) of this paragraph applies to automobiles manufactured by a manufacturer and sold in the United States, regardless of the place of assembly, as follows:

(i) A manufacturer that began assembling automobiles in Mexico before model year 1992 may elect, during the period from January 1, 1997, through January 1, 2004, to have subparagraph (A) of this paragraph apply to all automobiles manufactured by that manufacturer beginning with the model year that begins after the date of the election.

(ii) For a manufacturer that began assembling automobiles in Mexico after model year 1991, subparagraph (A) of this paragraph applies to all automobiles manufactured by that manufacturer beginning with the model year that begins after January 1, 1994, or the model year beginning after the date the manufacturer begins assembling automobiles in Mexico, whichever is later.

(iii) A manufacturer not described in clause (i) or (ii) of this subparagraph that assembles automobiles in the United States or Canada, but not in Mexico, may elect, during the period from January 1, 1997, through January 1, 2004, to have subparagraph (A) of this paragraph apply to all automobiles manufactured by that manufacturer beginning with the model year that begins after the date of the election. However, if the manufacturer begins assembling automobiles in Mexico before making an election under this subparagraph, this clause does not apply, and the manufacturer is subject to clause (ii) of this subparagraph.

(iv) For a manufacturer that does not assemble automobiles in the United States, Canada, or Mexico, subparagraph (A) of this paragraph applies to all automobiles manufactured by that manufacturer beginning with the model year that begins after January 1, 1994.

(v) For a manufacturer described in clause (i) or (iii) of this subparagraph that does not make an election within the specified period,

subparagraph (A) of this paragraph applies to all automobiles manufactured by that manufacturer beginning with the model year that begins after January 1, 2004.

(C) The Secretary of Transportation shall prescribe reasonable procedures for elections under subparagraph (B) of this paragraph.

(4) In this subsection, the fuel economy of a passenger automobile that is not manufactured domestically is deemed to be equal to the average fuel economy of all passenger automobiles manufactured by the same manufacturer that are not manufactured domestically.

(5)(A) A manufacturer may submit to the Secretary of Transportation for approval a plan, including supporting material, stating the actions and the deadlines for taking the actions, that will ensure that the model or models referred to in subparagraph (B) of this paragraph will be manufactured domestically before the end of the 4th model year covered by the plan. The Secretary promptly shall consider and act on the plan. The Secretary shall approve the plan unless—

(i) the Secretary finds that the plan is inadequate to meet the requirements of this paragraph; or

(ii) the manufacturer previously has submitted a plan approved by the Secretary under this paragraph.

(B) If the plan is approved, the Administrator shall include under paragraph (1)(A)(i) and exclude under paragraph (1)(A)(ii) of this subsection, for each of the 4 model years covered by the plan, not more than 150,000 passenger automobiles manufactured by that manufacturer but not qualifying as domestically manufactured if—

(i) the model or models involved previously have not been manufactured domestically;

(ii) at least 50 percent of the cost to the manufacturer of each of the automobiles is attributable to value added in the United States or Canada;

(iii) the automobiles, if their assembly was completed in Canada, are imported into the United States not later than 30 days after the end of the model year; and

(iv) the model or models are manufactured domestically before the end of the 4th model year covered by the plan.

(c) TESTING AND CALCULATION PROCEDURES.—The Administrator shall measure fuel economy for each model and calculate average fuel economy for a manufacturer under testing and calculation procedures prescribed by the Administrator. However, except under section 32908 of this title, the Administrator shall use the same procedures for passenger automobiles the Administrator used for model year 1975 (weighted 55 percent urban cycle and 45 percent highway cycle), or procedures that give comparable results. A measurement of fuel economy or a calculation of average fuel economy (except under section 32908) shall be rounded off to the nearest .1 of a mile a gallon. The Administrator shall decide on the quantity of other fuel that is equivalent to one gallon of gasoline. To the extent practicable, fuel economy tests shall be carried out with emissions tests under section 206 of the Clean Air Act (42 U.S.C. 7525).

(d) EFFECTIVE DATE OF PROCEDURE OR AMENDMENT.—The Administrator shall prescribe a procedure under this section, or an amendment (except a technical or clerical amendment) in a procedure, at least 12 months before the beginning of the model year to which the procedure or amendment applies.

(e) REPORTS AND CONSULTATION.—The Administrator shall report measurements and calculations under this section to the Secretary of Transportation and shall consult and coordinate with the Secretary in carrying out this section.

(Pub. L. 103–272, § 1(e), July 5, 1994, 108 Stat. 1062; Pub. L. 103–429, § 6(36), Oct. 31, 1994, 108 Stat. 4380; Pub. L. 104–287, § 5(63), Oct. 11, 1996, 110 Stat. 3395; Pub. L. 110–140, title I, §§ 104(b)(2), 113(a), Dec. 19, 2007, 121 Stat. 1503, 1508.)

HISTORICAL AND REVISION NOTES
PUB. L. 103–272

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
32904(a)(1) ..	15:2003(a)(1), (2).	Oct. 20, 1972, Pub. L. 92–513, 86 Stat. 947, § 503(a)(1), (2), (d)–(f); added Dec. 22, 1975, Pub. L. 94–163, § 301, 89 Stat. 906, 907.
32904(a)(2) ..	15:2003(a)(3).	Oct. 20, 1972, Pub. L. 92–513, 86 Stat. 947, § 503(a)(3); added Jan. 7, 1980, Pub. L. 96–185, § 18 (related to § 503(a)(3) of Motor Vehicle Information and Cost Savings Act), 93 Stat. 1336.
32904(b)(1) ..	15:2003(b)(2).	Oct. 20, 1972, Pub. L. 92–513, 86 Stat. 947, § 503(b)(1), (2); added Dec. 22, 1975, Pub. L. 94–163, § 301, 89 Stat. 906; Oct. 10, 1980, Pub. L. 96–425, §§ 4(c)(2), (3), 8(e), 94 Stat. 1824, 1829.
32904(b)(2) ..	15:2003(b)(1).	
32904(b)(3) ..	15:2003(b)(4).	Oct. 20, 1972, Pub. L. 92–513, 86 Stat. 947, § 503(b)(4); added Oct. 10, 1980, Pub. L. 96–425, § 4(b), 94 Stat. 1824.
32904(b)(4)–(6).	15:2003(b)(3).	Oct. 20, 1972, Pub. L. 92–513, 86 Stat. 947, § 503(b)(3); added Oct. 10, 1980, Pub. L. 96–425, § 4(a)(1), 94 Stat. 1822; Nov. 8, 1984, Pub. L. 98–620, § 402(18), 98 Stat. 3358.
32904(c)	15:2003(d)(1) (1st–3d sentences), (2), (e).	
32904(d)	15:2003(d)(3).	
32904(e)	15:2003(d)(1) (last sentence), (f).	

In subsection (a)(1), before clause (A), the words ''of a manufacturer subject to'' are substituted for ''for the purposes of'' for clarity. In clause (B)(ii), the words ''the sum of the fractions obtained by'' are substituted for ''a sum of terms, each term of which is a fraction created by'' to eliminate unnecessary words.

Subsection (a)(2)(A) is substituted for ''as defined in section 2012(b)(2) of this title'' for clarity.

In subsection (a)(2)(B), before clause (i), the words ''the Administrator shall include in the calculation of average fuel economy'' are substituted for ''the average fuel economy will be calculated . . . to include'' for clarity. The text of 15:2003(a)(3)(B) is omitted as executed. The words ''determine and propose'' are substituted for ''propose'' for clarity and consistency with the authority of the Secretary under the source provisions. The words ''based on the following factors'' are substituted for ''Determination of these fuel economy values will take into account the following parameters'' for clarity and to eliminate unnecessary words. The factors in clauses (i)–(iv) are applied to revisions in fuel economy values for clarity and consistency with the authority of the Secretary under the source provisions. In clause (iv), the words ''patterns of use'' are substituted for ''driving patterns'' for clarity.

In subsection (b)(1), before clause (A), the text of 15:2003(b)(2)(A)–(D) is omitted as executed. In clause (A), the words ''is imported . . . more than 30 days after'' are substituted for ''is not imported . . . prior to the expiration of 30 days following'' for clarity and for consistency in the revised chapter. The words ''The EPA Administrator may prescribe rules for purposes of carrying out this subparagraph'' are omitted as surplus because of the authority of the Administrator to prescribe regulations under section 32910(d) of the revised title. The term ''regulations'' is used in section 32910(d) instead of ''rules'' for consistency in the revised title and because the terms are synonymous. In clause (B), the words ''which is imported by a manufacturer in model year 1978 or any subsequent year, as the case may be, and'' are omitted as surplus.

In subsection (b)(2)(A), before clause (i), the words ''Except as provided in paragraphs (4) and (5) of this subsection'' are added for clarity. The words ''the Administrator shall make separate calculations'' are substituted for ''In calculating average fuel economy . . . the EPA Administrator shall separate the total number of passenger automobiles manufactured by a manufacturer into the following two categories'' and ''The EPA Administrator shall calculate the average fuel economy of each such separate category'' to eliminate unnecessary words. In clauses (i) and (ii), the reference in the parenthetical to paragraph (3) is substituted for the reference in the source to paragraph (3), which apparently should have been a reference to paragraph (4). The text of 15:2003(b)(1)(A) (words in parentheses) and (B) (words in parentheses) is omitted as executed.

Subsection (b)(2)(B) is substituted for 15:2003(b)(1) (words after last comma) because of the restatement.

In subsection (b)(3)(A), before clause (i), the word ''deadlines'' is substituted for ''dates'' for clarity. The text of 15:2003(b)(4)(C) is omitted as executed.

In subsection (b)(4)(A), before clause (i), the words ''A manufacturer may file with the Secretary of Transportation a petition for an exemption from the requirement of separate calculations under paragraph (2)(A) of this subsection'' are substituted for ''petition . . . for an exemption from the provisions of paragraph (1) filed by a manufacturer, the Secretary'' for clarity.

In subsection (b)(5)(B), the words ''judgment of the court under this subparagraph may be reviewed'' are substituted for ''judgment of the court affirming, remanding, or setting aside, in whole or in part, any such decision shall be final, subject to review'' to eliminate unnecessary words.

In subsection (b)(5)(C), the words ''Notwithstanding any other provision of law'' are omitted as surplus. The words ''a petition for'' are added for consistency.

In subsection (c), the words ''of a model type'' and ''of a manufacturer'' are omitted as surplus. The words ''by rule'' are omitted as surplus because of the authority of the Administrator to prescribe regulations under section 32910(d) of the revised title. The term ''regulations'' is used in section 32910(d) instead of ''rules'' for consistency in the revised title and because the terms are synonymous. The words ''However . . . the Administrator shall use the same procedures for passenger automobiles the Administrator used'' are substituted for ''Procedures so established with respect to passenger automobiles . . . shall be the procedures utilized by the EPA Administrator'' for clarity. The words ''(in accordance with rules of the EPA Administrator)'' are omitted as surplus. The words ''fuel economy tests shall be carried out with'' are substituted for ''Procedures under this subsection . . . shall require that fuel economy tests be conducted in conjunction with'' to eliminate unnecessary words.

In subsection (d), the words ''The Administrator shall prescribe a procedure under this section, or an amendment . . . at least'' are substituted for ''Testing and calculation procedures applicable to a model year and any amendment to such procedures . . . shall be promulgated not less than'' to eliminate unnecessary words.

In subsection (e), the words ''his duties under'' are omitted as surplus.

PUB. L. 103–429, §6(36)(A)

This makes conforming amendments necessary because of the restatement of 15:2003(b)(2)(G) as 49:32904(b)(3) by section 6(36)(B) of the bill.

PUB. L. 103–429, §6(36)(B)

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
32904(b)	15:2003(b)(2)(E), (G).	Oct. 20, 1972, Public Law 92–513, §503(b)(2)(E), (G), as amended Dec. 8, 1993, Pub. L. 103–182, §371, 107 Stat. 2127.

The text of 49:32904(b)(1) is the text of 49:32904(b)(2), as enacted by section 1 of the Act of July 5, 1994 (Public Law 103–272, 108 Stat. 1063), with conforming changes made in the cited cross-references.

The text of subsection (b)(2) is the text of 49:32904(b)(1)(A), as enacted by section 1 of the Act of July 5, 1994 (Public Law 103–272, 108 Stat. 1063), with the amendments of the underlying source provisions of 49:32904(b)(1)(A) made by section 371(b)(1) of the North American Free Trade Implementation Act (Public Law 103–182, 107 Stat. 2128). The words ''(except as provided in paragraph (3))'' are substituted for ''Except as provided in subparagraph (G)'' because of the restatement of 15:2003(b)(2)(G) as 49:32904(b)(3).

In subsection (b)(3)(A), the words ''is imported . . . more than 30 days after'' are substituted for ''is not imported . . . prior to the expiration of 30 days following'' for clarity and consistency with title 49, United States Code.

In subsection (b)(3)(C), the words ''and the EPA Administrator may prescribe rules for purposes of carrying out this subparagraph'' are omitted as surplus because of the authority of the Administrator to prescribe regulations under 49:32910(d). The amendment made by section 371(b)(2) of the North American Free Trade Implementation Act (Public Law 103–182, 107 Stat. 2128) is not given effect because the last sentence of section 503(b)(2)(E) of the Motor Vehicle and Cost Savings Act (Public Law 92–513, 86 Stat. 947) was omitted in the restatement of title 49 because of the authority of the Administrator to prescribe regulations under 49:32910(d).

The text of subsection (b)(4) is the text of 49:32904(b)(1)(B), as enacted by section 1 of the Act of July 5, 1994 (Public Law 103–272, 108 Stat. 1063).

PUB. L. 103–429, §6(36)(C), (D)

This makes conforming amendments necessary because of the restatement of 15:2003(b)(2)(G) as 49:32904(b)(3) by section 6(36)(B) of the bill.

Editorial Notes

AMENDMENTS

2007—Subsec. (b)(1)(B). Pub. L. 110–140, §104(b)(2), inserted '', except for the purposes of section 32903'' before period at end.

Subsec. (b)(6) to (8). Pub. L. 110–140, §113(a), struck out pars. (6) to (8) which related to exemption from separate calculations requirement, judicial review of denial of petition, and unavailability of section 32903(a) and (b)(2) credits during model year when exemption is effective, respectively.

1996—Subsec. (b)(6)(C). Pub. L. 104–287 substituted ''Committee on Commerce'' for ''Committee on Energy and Commerce''.

1994—Subsec. (b)(1). Pub. L. 103–429, §6(36)(B), added par. (1) and struck out former par. (1) which read as follows: ''In this subsection—

''(A) a passenger automobile is deemed to be manufactured domestically in a model year if at least 75 percent of the cost to the manufacturer is attributable to value added in the United States or Canada, unless the assembly of the automobile is completed in Canada and the automobile is imported into the

United States more than 30 days after the end of the model year; and

''(B) the fuel economy of a passenger automobile that is not manufactured domestically is deemed to be equal to the average fuel economy of all passenger automobiles manufactured by the same manufacturer that are not manufactured domestically.''

Subsec. (b)(2). Pub. L. 103–429, §6(36)(B), added par. (2) and struck out former par. (2) which read as follows:

''(2)(A) Except as provided in paragraphs (4) and (5) of this subsection, the Administrator shall make separate calculations under subsection (a)(1)(B) of this section for—

''(i) passenger automobiles manufactured domestically by a manufacturer (or included in this category under paragraph (3) of this subsection); and

''(ii) passenger automobiles not manufactured domestically by that manufacturer (or excluded from this category under paragraph (3) of this subsection).

''(B) Passenger automobiles described in subparagraph (A)(i) and (ii) of this paragraph are deemed to be manufactured by separate manufacturers under this chapter.''

Subsec. (b)(3), (4). Pub. L. 103–429, §6(36)(B), added pars. (3) and (4). Former pars. (3) and (4) redesignated (5) and (6), respectively.

Subsec. (b)(5). Pub. L. 103–429, §6(36)(A), redesignated par. (3) as (5). Former par. (5) redesignated (7).

Subsec. (b)(5)(B). Pub. L. 103–429, §6(36)(C), substituted ''paragraph (1)(A)(i) and exclude under paragraph (1)(A)(ii)'' for ''paragraph (2)(A)(i) and exclude under paragraph (2)(A)(ii)'' in introductory provisions.

Subsec. (b)(6). Pub. L. 103–429, §6(36)(A), redesignated par. (4) as (6). Former par. (6) redesignated (8).

Subsec. (b)(6)(A). Pub. L. 103–429, §6(36)(D), substituted ''paragraph (1)(A)'' for ''paragraph (2)(A)'' in introductory provisions.

Subsec. (b)(7), (8). Pub. L. 103–429, §6(36)(A), redesignated pars. (5) and (6) as (7) and (8), respectively.

Statutory Notes and Related Subsidiaries

EFFECTIVE DATE OF 2007 AMENDMENT

Amendment by Pub. L. 110–140 effective on the date that is 1 day after Dec. 19, 2007, see section 1601 of Pub. L. 110–140, set out as an Effective Date note under section 1824 of Title 2, The Congress.

EFFECT OF REPEAL ON EXISTING EXEMPTIONS

Pub. L. 110–140, title I, §113(b), (c), Dec. 19, 2007, 121 Stat. 1508, provided that:

''(b) EFFECT OF REPEAL ON EXISTING EXEMPTIONS.—Any exemption granted under section 32904(b)(6) of title 49, United States Code, prior to the date of the enactment of this Act [Dec. 19, 2007] shall remain in effect subject to its terms through model year 2013.

''(c) ACCRUAL AND USE OF CREDITS.—Any manufacturer holding an exemption under section 32904(b)(6) of title 49, United States Code, prior to the date of the enactment of this Act may accrue and use credits under sections 32903 and 32905 of such title beginning with model year 2011.''

§ 32905. Manufacturing incentives for alternative fuel automobiles

(a) DEDICATED AUTOMOBILES.—Except as provided in subsection (c) of this section or section 32904(a)(2) of this title, for any model of dedicated automobile manufactured by a manufacturer after model year 1992, the fuel economy measured for that model shall be based on the fuel content of the alternative fuel used to operate the automobile. A gallon of a liquid alternative fuel used to operate a dedicated automobile is deemed to contain .15 gallon of fuel.

(b) DUAL FUELED AUTOMOBILES.—Except as provided in subsection (d) of this section or section 32904(a)(2) of this title, for any model of dual fueled automobile manufactured by a manufacturer in model years 1993 through 2019, the Administrator of the Environmental Protection Agency shall measure the fuel economy for that model by dividing 1.0 by the sum of—

(1) .5 divided by the fuel economy measured under section 32904(c) of this title when operating the model on gasoline or diesel fuel; and

(2) .5 divided by the fuel economy—

(A) measured under subsection (a) when operating the model on alternative fuel; or

(B) measured based on the fuel content of B20 when operating the model on B20, which is deemed to contain 0.15 gallon of fuel.

(c) GASEOUS FUEL DEDICATED AUTOMOBILES.—For any model of gaseous fuel dedicated automobile manufactured by a manufacturer after model year 1992, the Administrator shall measure the fuel economy for that model based on the fuel content of the gaseous fuel used to operate the automobile. One hundred cubic feet of natural gas is deemed to contain .823 gallon equivalent of natural gas. The Secretary of Transportation shall determine the appropriate gallon equivalent of other gaseous fuels. A gallon equivalent of gaseous fuel is deemed to have a fuel content of .15 gallon of fuel.

(d) GASEOUS FUEL DUAL FUELED AUTOMOBILES.—For any model of gaseous fuel dual fueled automobile manufactured by a manufacturer in model years 1993 through 2019, the Administrator shall measure the fuel economy for that model by dividing 1.0 by the sum of—

(1) .5 divided by the fuel economy measured under section 32904(c) of this title when operating the model on gasoline or diesel fuel; and

(2) .5 divided by the fuel economy measured under subsection (c) of this section when operating the model on gaseous fuel.

(e) ELECTRIC DUAL FUELED AUTOMOBILES.—

(1) IN GENERAL.—At the request of the manufacturer, the Administrator may measure the fuel economy for any model of dual fueled automobile manufactured after model year 2015 that is capable of operating on electricity in addition to gasoline or diesel fuel, obtains its electricity from a source external to the vehicle, and meets the minimum driving range requirements established by the Secretary for dual fueled electric automobiles, by dividing 1.0 by the sum of—

(A) the percentage utilization of the model on gasoline or diesel fuel, as determined by a formula based on the model's alternative fuel range, divided by the fuel economy measured under section 32904(c); and

(B) the percentage utilization of the model on electricity, as determined by a formula based on the model's alternative fuel range, divided by the fuel economy measured under section 32904(a)(2).

(2) ALTERNATIVE CALCULATION.—If the manufacturer does not request that the Administrator calculate the manufacturing incentive for its electric dual fueled automobiles in accordance with paragraph (1), the Administrator shall calculate such incentive for such automobiles manufactured by such manufacturer after model year 2015 in accordance with subsection (b).

(f) FUEL ECONOMY CALCULATIONS.—The Administrator shall calculate the manufacturer's average fuel economy under section 32904(a)(1) of this title for each model described under subsections (a)–(d) of this section by using as the denominator the fuel economy measured for each model under subsections (a)–(d).

(g) FUEL ECONOMY INCENTIVE REQUIREMENTS.—In order for any model of dual fueled automobile to be eligible to receive the fuel economy incentives included in section 32906(a) and (b), a label shall be attached to the fuel compartment of each dual fueled automobile of that model, notifying that the vehicle can be operated on an alternative fuel and on gasoline or diesel, with the form of alternative fuel stated on the notice. This requirement applies to dual fueled automobiles manufactured on or after September 1, 2006.

(Pub. L. 103–272, § 1(e), July 5, 1994, 108 Stat. 1065; Pub. L. 104–287, § 5(63), Oct. 11, 1996, 110 Stat. 3395; Pub. L. 109–58, title VII, §§ 759, 772(a), Aug. 8, 2005, 119 Stat. 833, 834; Pub. L. 110–140, title I, § 109(b), (c), Dec. 19, 2007, 121 Stat. 1506; Pub. L. 113–291, div. A, title III, § 318(c), Dec. 19, 2014, 128 Stat. 3341.)

HISTORICAL AND REVISION NOTES

Revised Section	*Source (U.S. Code)*	*Source (Statutes at Large)*
32905(a)	15:2013(a), (f)(1).	Oct. 20, 1972, Pub. L. 92–513, 86 Stat. 947, § 513(a)–(f); added Oct. 14, 1988, Pub. L. 100–494, § 6(a), 102 Stat. 2448; Oct. 24, 1992, Pub. L. 102–486, § 403(5)(A)–(F), 106 Stat. 2876.
32905(b)	15:2013(b), (f)(1).	
32905(c)	15:2013(c), (f)(1).	
32905(d)	15:2013(d), (f)(1).	
32905(e)	15:2013(e).	
32905(f)	15:2013(f)(2)(B).	
32905(g)	15:2013(f)(2)(A).	

In subsections (a) and (c), the words ''after model year 1992'' are substituted for ''Subsections (a) and (c) shall apply only to automobiles manufactured after model year 1992'' because of the restatement.

In subsections (b) and (d), before each clause (1), the words ''in model years 1993–2004'' are substituted for ''Except as otherwise provided in this subsection, subsections (b) and (d) shall apply only to automobiles manufactured in model year 1993 through model year 2004'' to eliminate unnecessary words and because of the restatement.

In subsection (c), the words ''For purposes of this section'' and ''than natural gas'' are omitted as unnecessary because of the restatement. The words ''a gallon equivalent of natural gas'' are omitted as being included in ''A gallon equivalent of any gaseous fuel''.

In subsection (e), the words ''subject to the provisions of this section'' are omitted as unnecessary because of the restatement. The words ''for each model described under subsections (a)–(d) of this section'' are substituted for ''for each model type of dedicated automobile or dual fueled automobile'' to eliminate unnecessary words. The words ''by using as the denominator'' are substituted for ''by including as the denominator of the term'' for clarity.

Editorial Notes

AMENDMENTS

2014—Subsecs. (e) to (g). Pub. L. 113–291 added subsec. (e) and redesignated former subsecs. (e) and (f) as (f) and (g), respectively.

2007—Subsec. (b). Pub. L. 110–140, § 109(b)(1), substituted ''1993 through 2019'' for ''1993–2010'' in introductory provisions.

Subsec. (b)(2). Pub. L. 110–140, § 109(c), amended par. (2) generally. Prior to amendment, par. (2) read as follows: ''.5 divided by the fuel economy measured under subsection (a) of this section when operating the model on alternative fuel.''

Subsec. (d). Pub. L. 110–140, § 109(b)(2), substituted ''1993 through 2019'' for ''1993–2010'' in introductory provisions.

Subsecs. (f) to (h). Pub. L. 110–140, § 109(b)(3), (4), redesignated subsec. (h) as (f) and struck out former subsecs. (f) and (g) which related to temporary extension of application of subsecs. (b) and (d) and study and report on success of the policy of subsecs. (b) and (d), respectively.

2005—Subsecs. (b), (d). Pub. L. 109–58, § 772(a)(1), substituted ''1993–2010'' for ''1993–2004'' in introductory provisions.

Subsec. (f). Pub. L. 109–58, § 772(a)(2), substituted ''2007'' for ''2001'' in introductory provisions.

Subsec. (f)(1). Pub. L. 109–58, § 772(a)(3), substituted ''2010'' for ''2004''.

Subsec. (h). Pub. L. 109–58, § 759, added subsec. (h).

1996—Subsec. (g). Pub. L. 104–287 substituted ''Committee on Commerce'' for ''Committee on Energy and Commerce''.

Statutory Notes and Related Subsidiaries

EFFECTIVE DATE OF 2007 AMENDMENT

Amendment by Pub. L. 110–140 effective on the date that is 1 day after Dec. 19, 2007, see section 1601 of Pub. L. 110–140, set out as an Effective Date note under section 1824 of Title 2, The Congress.

§ 32906. Maximum fuel economy increase for alternative fuel automobiles

(a) IN GENERAL.—For each of model years 1993 through 2019 for each category of automobile (except an electric automobile or, beginning with model year 2016, an alternative fueled automobile that uses a fuel described in subparagraph (E) of section 32901(a)(1)), the maximum increase in average fuel economy for a manufacturer attributable to dual fueled automobiles is—

(1) 1.2 miles a gallon for each of model years 1993 through 2014;

(2) 1.0 miles per gallon for model year 2015;

(3) 0.8 miles per gallon for model year 2016;

(4) 0.6 miles per gallon for model year 2017;

(5) 0.4 miles per gallon for model year 2018;

(6) 0.2 miles per gallon for model year 2019; and

(7) 0 miles per gallon for model years after 2019.

(b) CALCULATION.—In applying subsection (a), the Administrator of the Environmental Protection Agency shall determine the increase in a manufacturer's average fuel economy attributable to dual fueled automobiles by subtracting from the manufacturer's average fuel economy calculated under section 32905(f) the number equal to what the manufacturer's average fuel economy would be if it were calculated by the formula under section 32904(a)(1) by including as the denominator for each model of dual fueled automobiles the fuel economy when the automobiles are operated on gasoline or diesel fuel.

(Pub. L. 103–272, § 1(e), July 5, 1994, 108 Stat. 1067; Pub. L. 109–58, title VII, § 772(b), Aug. 8, 2005, 119 Stat. 834; Pub. L. 110–140, title I, § 109(a), Dec. 19, 2007, 121 Stat. 1505; Pub. L. 113–291, div. A, title III, § 318(a), (d), Dec. 19, 2014, 128 Stat. 3341, 3342.)

such inspections. For the purposes of this section, the term "probable cause" means a valid public interest in the effective enforcement of this subchapter or regulations issued thereunder sufficient to justify administrative inspections of the area, factory, warehouse, establishment, premises, or motor vehicle, or contents thereof, in the circumstances specified in the application for the warrant.

(2) A warrant shall be issued only upon an affidavit of an officer or employee having knowledge of the facts alleged, sworn to before the judge or magistrate and establishing the grounds for issuing the warrant. If the judge or magistrate is satisfied that grounds for the application exist or that there is a reasonable basis for believing they exist, he shall issue a warrant identifying the area, factory, warehouse, establishment, premises, or motor vehicle to be inspected, the purpose of such inspection, and, where appropriate, the type of property to be inspected, if any. The warrant shall—

(A) identify the items or type of property to be impounded, if any;

(B) be directed to a person authorized under section 1990d of this title to execute it;

(C) state the grounds for its issuance and the name of the person or persons whose affidavit has been taken in support thereof;

(D) command the person to whom it is directed to inspect the area, factory, warehouse, establishment, premises, or motor vehicle identified for the purpose specified, and, where appropriate, shall direct the impoundment of the property specified;

(E) direct that it be served during the hours specified in it; and

(F) designate the judge or magistrate to whom it shall be returned.

(3) A warrant issued pursuant to this section must be executed and returned within 10 days of its date unless, upon a showing by the Secretary of a need therefor, the judge or magistrate allows additional time in the warrant. If property is impounded pursuant to a warrant, the person executing the warrant shall give the person from whom or from whose premises the property was taken a copy of the warrant and a receipt for the property taken or shall leave the copy and receipt at the place from which the property was taken. The return of the warrant shall be made promptly and shall be accompanied by a written inventory of any property taken. The inventory shall be made in the presence of the person executing the warrant and of the person from whose possession or premises the property was taken, if they are present, or in the presence of at least one credible person other than the person making such inventory, and shall be verified by the person executing the warrant. The judge or magistrate, upon request, shall deliver a copy of the inventory to the person from whom or from whose premises the property was taken and to the applicant for the warrant.

(4) The judge or magistrate who has issued a warrant under this section shall attach to the warrant a copy of the return and all papers filed in connection therewith and shall file them with the clerk of the district court of the United States for the judicial district in which the inspection was made.

(Pub. L. 92-513, title IV, § 415, as added Pub. L. 94-364, title IV, § 408(2), July 14, 1976, 90 Stat. 987.)

§ 1990f. Compliance with inspection and investigation requirements

No person shall fail to comply with the requirements of section 1990d of this title to maintain records, make reports, provide information, permit access to or copying of records, permit entry or inspection, or permit impounding.

(Pub. L. 92-513, title IV, § 416, as added Pub. L. 94-364, title IV, § 408(2), July 14, 1976, 90 Stat. 988.)

§ 1990g. Authorization of appropriations

There are authorized to be appropriated to carry out this subchapter $450,000 for the fiscal year ending June 30, 1976; $100,000 for the period beginning July 1, 1976, and ending September 30, 1976; $650,000 for the fiscal year ending September 30, 1977; and $562,000 for the fiscal year ending September 30, 1978.

(Pub. L. 92-513, title IV, § 417, as added Pub. L. 94-364, title IV, § 408(2), July 14, 1976, 90 Stat. 989.)

§ 1991. State odometer requirements

This subchapter does not—

(1) annul, alter, or affect the laws of any State with respect to the disconnecting, altering, or tampering with odometers with the intent to defraud, or

(2) exempt any person subject to the provisions of this subchapter from complying with such laws,

except to the extent that those laws are inconsistent with any provision of this subchapter, and then only to the extent of the inconsistency.

(Pub. L. 92-513, title IV, § 418, formerly § 411, Oct. 20, 1972, 86 Stat. 963, renumbered Pub. L. 94-364, title IV, § 408(1), July 14, 1976, 90 Stat. 984.)

SUBCHAPTER V—IMPROVING AUTOMOTIVE EFFICIENCY

PART A [1]—AUTOMOTIVE FUEL ECONOMY

PART REFERRED TO IN OTHER SECTIONS

This part is referred to in section 1901 of this title.

§ 2001. Definitions

For purposes of this part:

(1) The term "automobile" means any 4-wheeled vehicle propelled by fuel which is manufactured primarily for use on public streets, roads, and highways (except any vehicle operated exclusively on a rail or rails), and

(A) which is rated at 6,000 lbs. gross vehicle weight or less, or

[1] So in original. There are no other parts in this subchapter.

(B) which—

(i) is rated at more than 6,000 lbs. gross vehicle weight but less than 10,000 lbs. gross vehicle weight,

(ii) is a type of vehicle for which the Secretary determines, by rule, average fuel economy standards under this part are feasible, and

(iii) is a type of vehicle for which the Secretary determines, by rule, average fuel economy standards will result in significant energy conservation, or is a type of vehicle which the Secretary determines is substantially used for the same purposes as vehicles described in subparagraph (A) of this paragraph.

The Secretary may prescribe such rules as may be necessary to implement this paragraph.

(2) The term "passenger automobile" means any automobile (other than an automobile capable of off-highway operation) which the Secretary determines by rule is manufactured primarily for use in the transportation of not more than 10 individuals.

(3) The term "automobile capable of off-highway operation" means any automobile which the Secretary determines by rule—

(A) has a significant feature (other than 4-wheel drive) which is designed to equip such automobile for off-highway operation, and

(B) either—

(i) is a 4-wheel drive automobile, or

(ii) is rated at more than 6,000 pounds gross vehicle weight.

(4) The term "average fuel economy" means average fuel economy, as determined under section 2003 of this title.

(5) The term "fuel" means gasoline and diesel oil. The Secretary may, by rule, include any other liquid fuel or any gaseous fuel within the meaning of the term "fuel" if he determines that such inclusion is consistent with the need of the Nation to conserve energy.

(6) The term "fuel economy" means the average number of miles traveled by an automobile per gallon of gasoline (or equivalent amount of other fuel) consumed, as determined by the EPA Administrator in accordance with procedures established under section 2003(d) of this title.

(7) The term "average fuel economy standard" means a performance standard which specifies a minimum level of average fuel economy which is applicable to a manufacturer in a model year.

(8) The term "manufacturer" means any person engaged in the business of manufacturing automobiles. The Secretary shall prescribe rules for determining, in cases where more than one person is the manufacturer of an automobile, which person is to be treated as the manufacturer of such automobile for purposes of this part.

(9) The term "manufacturer" (except for purposes of section 2002(c) of this title) means to produce or assemble in the customs territory of the United States, or to import.

(10) The term "import" means to import into the customs territory of the United States.

(11) The term "model type" means a particular class of automobile as determined, by rule, by the EPA Administrator, after consultation and coordination with the Secretary.

(12) The term "model year", with reference to any specific calendar year, means a manufacturer's annual production period (as determined by the EPA Administrator) which includes January 1 of such calendar year. If a manufacturer has no annual production period, the term "model year" means the calendar year.

(13) The term "Secretary" means the Secretary of Transportation.

(14) The term "EPA Administrator" means the Administrator of the Environmental Protection Agency.

(Pub. L. 92-513, title V, § 501, as added Pub. L. 94-163, title III, § 301, Dec. 22, 1975, 89 Stat. 901.)

SECTION REFERRED TO IN OTHER SECTIONS

This section is referred to in sections 2004, 2006, 2012 of this title; title 42 section 6291.

§ 2002. Average fuel economy standards

(a) Standards for passenger vehicles manufactured after 1977; review of standards; report to Congress; standards for passenger automobiles manufactured from 1981 through 1984; amendment of standards

(1) Except as otherwise provided in paragraph (4) or in subsection (c) or (d) of this section, the average fuel economy for passenger automobiles manufactured by any manufacturer in any model year after model year 1977 shall not be less than the number of miles per gallon established for such model year under the following table:

Model year:	*Average fuel economy standard (in miles per gallon)*
1978	18.0.
1979	19.0.
1980	20.0.
1981	Determined by Secretary under paragraph (3) of this subsection.
1982	Determined by Secretary under paragraph (3) of this subsection.
1983	Determined by Secretary under paragraph (3) of this subsection.
1984	Determined by Secretary under paragraph (3) of this subsection.
1985 and thereafter	27.5.

(2) Not later than January 15 of each year, beginning in 1977, the Secretary shall transmit to each House of Congress, and publish in the Federal Register, a review of average fuel economy standards under this part. The review required to be transmitted not later than January 15, 1979, shall include a comprehensive analysis of the program required by this part. Such analysis shall include an assessment of the ability of manufacturers to meet the average fuel economy standard for model year 1985 as specified in paragraph (1) of this subsection, and any legislative recommendations the Secretary

or the EPA Administrator may have for improving the program required by this part.

(3) Not later than July 1, 1977, the Secretary shall prescribe, by rule, average fuel economy standards for passenger automobiles manufactured in each of the model years 1981 through 1984. Any such standard shall apply to each manufacturer (except as provided in subsection (c) of this section), and shall be set for each such model year at a level which the Secretary determines (A) is the maximum feasible average fuel economy level, and (B) will result in steady progress toward meeting the average fuel economy standard established by or pursuant to this subsection for model year 1985.

(4) The Secretary may, by rule, amend the average fuel economy standard specified in paragraph (1) for model year 1985, or for any subsequent model year, to a level which he determines is the maximum feasible average fuel economy level for such model year, except that any amendment which has the effect of increasing an average fuel economy standard to a level in excess of 27.5 miles per gallon, or of decreasing any such standard to a level below 26.0 miles per gallon, shall be submitted to the Congress in accordance with section 551 of the Energy Policy and Conservation Act [42 U.S.C. 6421], and shall not take effect if either House of the Congress disapproves such amendment in accordance with the procedures specified in such section.

(5) For purposes of considering any modification which is submitted to the Congress under paragraph (4), the 5 calendar days specified in section 551(f)(4)(A) of the Energy Policy and Conservation Act [42 U.S.C. 6421(f)(4)(A)] shall be lengthened to 20 calendar days, and the 15 calendar days specified in section 551(c) and (d) of such Act [42 U.S.C. 6421(c) and (d)] shall be lengthened to 60 calendar days.

(b) Standards for other than passenger automobiles

The Secretary shall, by rule, prescribe average fuel economy standards for automobiles which are not passenger automobiles and which are manufactured by any manufacturer in each model year which begins more than 30 months after December 22, 1975. Such rules may provide for separate standards for different classes of such automobiles (as determined by the Secretary), and shall[1] be set at a level which the Secretary determines is the maximum feasible average fuel economy level which such manufacturers are able to achieve in each model year to which this subsection applies. Any standard applicable to a model year under this subsection shall be prescribed at least 18 months prior to the beginning of such model year.

(c) Exemptions for manufacturers of limited number of cars

On application of a manufacturer who manufactured (whether or not in the United States) fewer than 10,000 passenger automobiles in the second model year preceding the model year for which the application is made, the Secretary may, by rule, exempt such manufacturer from subsection (a) of this section. An application for such an exemption shall be submitted to the Secretary, and shall contain such information as the Secretary may require by rule. Such exemption may only be granted if the Secretary determines that the average fuel economy standard otherwise applicable under subsection (a) of this section is more stringent than the maximum feasible average fuel economy level which such manufacturer can attain. The Secretary may not issue exemptions with respect to a model year unless he establishes, by rule, alternative average fuel economy standards for passenger automobiles manufactured by manufacturers which receive exemptions under this subsection. Such standards may be established for an individual manufacturer, for all automobiles to which this subsection applies, or for such classes of such automobiles as the Secretary may define by rule. Each such standard shall be set at a level which the Secretary determines is the maximum feasible average fuel economy level for the manufacturers to which the standard applies. An exemption under this subsection shall apply to a model year only if the manufacturer manufactures (whether or not in the United States) fewer than 10,000 passenger automobiles in such model year.

(d) Application for modification of standards

(1) Any manufacturer may apply to the Secretary for modification of an average fuel economy standard applicable under subsection (a) of this section to such manufacturer for model year 1978, 1979, or 1980. Such application shall contain such information as the Secretary may require by rule, and shall be submitted to the Secretary within 24 months before the beginning of the model year for which such modification is requested.

(2)(A) If a manufacturer demonstrates and the Secretary finds that—

(i) a Federal standards fuel economy reduction is likely to exist for such manufacturer for the model year to which the application relates, and

(ii) such manufacturer applied a reasonably selected technology,

the Secretary shall, by rule, reduce the average fuel economy standard applicable under subsection (a) of this section to such manufacturer by the amount of such manufacturer's Federal standards fuel economy reduction, rounded off to the nearest one-tenth mile per gallon (in accordance with rules of the Secretary). To the maximum extent practicable, prior to making a finding under this paragraph with respect to an application, the Secretary shall request, and the EPA Administrator shall supply, test results collected pursuant to section 2003(d) of this title for all automobiles covered by such application.

(B)(i) If the Secretary does not find that a Federal standards fuel economy reduction is likely to exist for a manufacturer who filed an application under paragraph (1), he shall deny the application of such manufacturer.

(ii) If the Secretary—

(I) finds that a Federal standards fuel economy reduction is likely to exist for a manufacturer who filed an application under paragraph (1), and

(II) does not find that such manufacturer applied a reasonably selected technology,

[1] So in original. Probably should be "such standards shall".

the average fuel economy standard applicable under subsection (a) of this section to such manufacturer shall, by rule, be reduced by an amount equal to the Federal standards fuel economy reduction which the Secretary finds would have resulted from the application of a reasonably selected technology.

(3) For purposes of this subsection:

(A) The term "reasonably selected technology" means a technology which the Secretary determines it was reasonable for a manufacturer to select, considering (i) the Nation's need to improve the fuel economy of its automobiles, and (ii) the energy savings, economic costs, and lead-time requirements associated with alternative technologies practicably available to such manufacturer.

(B) The term "Federal standards fuel economy reduction" means the sum of the applicable fuel economy reductions determined under subparagraph (C).

(C) The term "applicable fuel economy reduction" means a number of miles per gallon equal to—

(i) the reduction in a manufacturer's average fuel economy in a model year which results from the application of a category of Federal standards applicable to such model year, and which would not have occurred had Federal standards of such category applicable to model year 1975 remained the only standards of such category in effect, *minus*

(ii) 0.5 mile per gallon.

(D) Each of the following is a category of Federal standards;

(i) Emissions standards under section 202 of the Clean Air Act [42 U.S.C. 1857f-1] and emissions standards applicable by reason of section 209(b) of such Act [42 U.S.C. 1857f-6a(b)].

(ii) Motor vehicle safety standards under the National Traffic and Motor Vehicle Safety Act of 1966 [15 U.S.C. 1381 et seq.].

(iii) Noise emission standards under section 6 of the Noise Control Act of 1972 [42 U.S.C. 4905].

(iv) Property loss reduction standards under subchapter I of this chapter.

(E) In making the determination under this subparagraph,[1] the Secretary (in accordance with such methods as he shall prescribe by rule) shall assume a production mix for such manufacturer which would have achieved the average fuel economy standard for such model year had standards described in subparagraph (D) applicable to model year 1975 remained the only standards in effect.

(4) The Secretary may, for the purposes of conducting a proceeding under this subsection, consolidate one or more applications filed under this subsection.

(e) Determination of maximum feasible average fuel economy

For purposes of this section, in determining maximum feasible average fuel economy, the Secretary shall consider—

(1) technological feasibility;

(2) economic practicability;

(3) the effect of other Federal motor vehicle standards on fuel economy; and

(4) the need of the Nation to conserve energy.

(f) Amendment of average fuel economy standards

(1) The Secretary may, by rule, from time to time, amend any average fuel economy standard prescribed under subsection (a)(3), (b), or (c) of this section, so long as such standard, as amended, meets the requirements of subsection (a)(3), (b), or (c) of this section, as the case may be.

(2) Any amendment prescribed under this section which has the effect of making any average fuel economy standard more stringent shall be—

(A) promulgated, and

(B) if required by paragraph (4) of subsection (a) of this section, submitted to the Congress,

at least 18 months prior to the beginning of the model year to which such amendment will apply.

(g) Application of other laws

Proceedings under subsection (a)(4) or (d) of this section shall be conducted in accordance with section 553 of title 5 except that interested persons shall be entitled to make oral as well as written presentations. A transcript shall be taken of any oral presentations.

(Pub. L. 92-513, title V, § 502, as added Pub. L. 94-163, title III, § 301, Dec. 22, 1975, 89 Stat. 902.)

REFERENCES IN TEXT

The National Traffic and Motor Vehicle Safety Act of 1966, referred to in subsec. (d)(3)(D)(ii), is Pub. L. 89-563, Sept. 9, 1966, 80 Stat. 718, which is classified to chapter 38 (§ 1381 et seq.) of this title. For complete classification of this Act to the Code, see Short Title note set out under section 1381 of this title and Tables volume.

SECTION REFERRED TO IN OTHER SECTIONS

This section is referred to in sections 2001, 2003, 2004, 2005, 2007, 2008, 2010 of this title.

§ 2003. Calculation of average fuel economy

(a) Method of calculation

(1) Average fuel economy for purposes of section 2002(a) and (c) of this title shall be calculated by the EPA Administrator by dividing—

(A) the total number of passenger automobiles manufactured in a given model year by a manufacturer, by

(B) a sum of terms, each term of which is a fraction created by dividing—

(i) the number of passenger automobiles of a given model type manufactured by such manufacturer in such model year, by

(ii) the fuel economy measured for such model type.

(2) Average fuel economy for purposes of section 2002(b) of this title shall be calculated in accordance with rules of the EPA Administrator.

(b) Automobile categories

(1) In calculating average fuel economy under subsection (a)(1) of this section, the EPA Administrator shall separate the total number of

[1] So in original, probably should be "subsection,".

Secretary of State to transmit the same to the executive of Virginia.
Act of June 9, 1794, ch. 62.

be so completed and entered of record, to transmit the same to the executive of the state of Virginia, to be by them delivered to each grantee; or in case of his death, or that the right of the grantees shall have been legally transferred before such delivery, then to his legal representative or representatives, or to one of them.

Letters patent obtained without fees.

Sec. 7. *And be it further enacted*, That no fees shall be charged for such letters patent and record, to the grantees, their heirs or assigns, or to his or their legal representative or representatives.

Approved, August 10, 1790.

Statute II.

August 10, 1790.

Chap. XLI.—*An Act authorizing the Secretary of the Treasury to finish the Lighthouse on Portland Head, in the District of Maine.*

$1500 appropriated.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there be appropriated and paid out of the monies arising from the duties on imports and tonnage, a sum not exceeding fifteen hundred dollars, for the purpose of finishing the lighthouse on Portland Head, in the district of Maine; and that the Secretary of the Treasury, under the directions of the President of the United States, be authorized to cause the said lighthouse to be finished and completed accordingly.

Approved, August 10, 1790.

Statute II.

August 11, 1790.

Chap. XLII.—*An Act to alter the Times for holding the Circuit Courts of the United States in the Districts of South Carolina and Georgia, and providing that the District Court of Pennsylvania shall in future be held at the city of Philadelphia only.*

[Obsolete.]
1794, ch. 64.
Circuit courts when and where to be held.

Section 1. *Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled*, That the circuit courts of the United States in the districts of South Carolina and Georgia, shall for the future be held as follows, to wit: In the district of South Carolina on the twenty-fifth day of October next, at Charleston, and in each succeeding year at Columbia, on the twelfth day of May, and in Charleston on the twenty-fifth day of October; in the district of Georgia on the fifteenth day of October next, at Augusta, and in each succeeding year at Savannah, on the twenty-fifth day of April, and at Augusta on the fifteenth day of October; except when any of those days shall happen to be Sunday, in which case the court shall be held on the Monday following. And all process that was returnable under the former law at Charleston, on the first day of October next, and at Augusta on the seventeenth day of October, shall now be deemed returnable respectively at Charleston on the twenty-fifth day of October next, and at Augusta on the fifteenth day of October next; any thing in the former law to the contrary notwithstanding.

South Carolina 1789, ch. 20, sec. 5.

Georgia 1789, ch. 20, sec. 5.

Part of a former act repealed.

Sec. 2. *And be it further enacted*, That so much of the act, entitled "An act to establish the judicial courts of the United States," as directs that the district court for the district of Pennsylvania shall be held at Yorktown in the said state, be repealed; and that in future the district court for Pennsylvania be held in the city of Philadelphia.

Pennsylvania 1789, ch. 20, sec. 3.

Approved, August 11, 1790.

Statute II.

August 11, 1790.

Chap. XLIII.—*An Act declaring the assent of Congress to certain acts of the states of Maryland, Georgia, and Rhode Island and Providence Plantations.*

1791, ch. 3.
1792, ch. 10.
[Expired.]

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the consent of Congress be, and is hereby declared to the operation of the acts of the

several states herein after mentioned, so far as the same relate to the levying a duty on the tonnage of ships and vessels for the purposes therein mentioned until the tenth day of January next—that is to say: an act of the General Assembly of the state of Rhode Island and Providence Plantations, at their session held in January, one thousand seven hundred and ninety, intituled "An act to incorporate certain persons by the name of the River Machine Company, in the town of Providence, and for other purposes therein mentioned;" and also, an act of the General Assembly of the state of Maryland, at their session in April, one thousand seven hundred and eighty-three, intituled "An act appointing wardens for the port of Baltimore-town in Baltimore county;" as also, another act of the General Assembly of the same state, passed at their session in November, one thousand seven hundred and eighty-eight, intituled "A supplement to the act intituled, An act appointing wardens for the port of Baltimore-town in Baltimore county;" and also, an act of the state of Georgia, "for levying and appropriating a duty on tonnage, for the purpose of clearing the river Savannah, and removing the wrecks and other obstructions therein."

Act of May 12, 1796, ch. 26. [Expired.]

Certain acts of several states, that relate to the tonnage of vessels declared to be in operation till the tenth of January next.

The act of August 11, 1790, ch. 45, is inserted among the private laws.

APPROVED, August 11, 1790.

STATUTE II.

August 12, 1790.

CHAP. XLVI.—*An Act making certain Appropriations therein mentioned.*

[Obsolete.]

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there be appropriated to the purposes herein after mentioned, to be paid out of the monies arising from the duties on goods, wares and merchandise imported, and on the tonnage of ships or vessels, the following sums—to wit: The sum of thirty-eight thousand eight hundred and ninety-two dollars and seventy-five cents, towards discharging certain debts contracted by Abraham Skinner, late commissary of prisoners, on account of the subsistence of the officers of the late army while in captivity: The sum of forty thousand dollars, towards discharging certain debts contracted by colonel Timothy Pickering, late quartermaster general, and which sum was included in the amount of a warrant drawn in his favour by the late superintendent of the finances of the United States, and which warrant was not discharged: The sum of one hundred and four thousand three hundred and twenty-seven dollars and twenty-two cents, for the several purposes specified in an estimate accompanying the report of the Secretary of the Treasury of the fifth instant, including one thousand dollars for defraying the expenses of certain establishments for the security of navigation of the like nature with those mentioned in the act, intituled "An act for the establishment and support of light-houses, beacons, buoys and public piers," but not particularly specified therein: The sum of one hundred and eighty-one dollars and forty-two cents, for reimbursing the Secretary at War an advance by him made on account of George Morgan White Eyes, over and above the sum heretofore appropriated on account of the said George Morgan White Eyes: The sum of six hundred and thirty-two dollars and eighty cents, for the services and expenses of Isaac Guion, employed by direction of the President of the United States, in relation to the resolution of Congress of the twenty-sixth of August last: The sum of forty-one dollars and forty-seven cents, for reimbursing the treasurer of the United States the costs by him paid on a protested bill: The sum of two hundred and fifty dollars, for the salary of an interpreter of the French language, employed in the department of state: The sum of three hundred and twenty-six dollars and six cents, for sundry expenditures by Richard Phillips, on account of the household of the late President of Congress, and for certain unsatisfied claims against the same: The sum of seven

Sum granted to A. Skinner, and

T. Pickering;

and for purposes estimated in a report of the Secretary of the Treasury.

1789, ch. 9.

Ante, p. 96.

shall be detained longer than five days after the arrest, and before removal. And all officers and soldiers who may have any such person or persons in custody, shall treat them with all the humanity which the circumstances will possibly permit; and every officer and soldier who shall be guilty of maltreating any such person, while in custody, shall suffer such punishment as a court martial shall direct: *Provided*, that the officer having custody of such person or persons shall, if required by such person or persons, conduct him or them to the nearest judge of the supreme or superior court of any state, who, if the offence is bailable, shall take proper bail if offered, returnable to the district court next to be holden in said district, which bail the said judge is hereby authorized to take, and which shall be liable to be estreated as any other recognizance for bail in any court of the United States; and if said judge shall refuse to act, or the person or persons fail to procure satisfactory bail, then the said person or persons are to be proceeded with according to the directions of this act.

Military not to use violence.

Sec. 17. *And be it further enacted*, That if any person, who shall be charged with a violation of any of the provisions or regulations of this act, shall be found within any of the United States, or either of the territorial districts of the United States, such offender may be there apprehended and brought to trial, in the same manner, as if such crime or offence had been committed within such state or district; and it shall be the duty of the military force of the United States, when called upon by the civil magistrate, or any proper officer, or other person duly authorized for that purpose and having a lawful warrant, to aid and assist such magistrate, officer, or other person authorized, as aforesaid, in arresting such offender, and him committing to safe custody, for trial according to law.

Violators of this law, if found within the U. S. how punishable.

Sec. 18. *And be it further enacted*, That the amount of fines, and duration of imprisonment, directed by this act as a punishment for the violation of any of the provisions thereof, shall be ascertained and fixed, not exceeding the limits prescribed, in the discretion of the court, before whom the trial shall be had; and that all fines and forfeitures, which shall accrue under this act, shall be one half to the use of the informant, and the other half to the use of the United States; except where the prosecution shall be first instituted on behalf of the United States; in which case the whole shall be to their use.

How penalties are to be fixed.

To whose benefit.

Sec. 19. *And be it further enacted*, That nothing in this act shall be construed to prevent any trade or intercourse with Indians living on lands surrounded by settlements of the citizens of the United States, and being within the ordinary jurisdiction of any of the individual states; or the unmolested use of a road from Washington district to Mero district, or to prevent the citizens of Tennessee from keeping in repair the said road, under the direction or orders of the governor of said state, and of the navigation of the Tennessee river, as reserved and secured by treaty; nor shall this act be construed to prevent any person or persons travelling from Knoxville to Price's settlement, or to the settlement on Obed's river, (so called,) provided they shall travel in the trace or path which is usually travelled, and provided the Indians make no objection; but if the Indians object, the President of the United States is hereby authorized to issue a proclamation, prohibiting all travelling on said traces, or either of them, as the case may be, after which, the penalties of this act shall be incurred by every person travelling or being found on said traces, or either of them, to which the prohibition may apply, within the Indian boundary, without a passport.

Trade and intercourse with Indians under circumstances described not forbidden by this act.

Sec. 20. *And be it further enacted*, That the President of the United States be, and he is hereby authorized to cause to be clearly ascertained and distinctly marked, in all such places as he shall deem necessary, and in such manner as he shall direct, any other boundary lines between the

President to cause boundaries to be ascertained and marked.

duty on tonnage.

year one thousand eight hundred and five, intituled "An act to empower the board of wardens, for the port of Philadelphia, to collect a certain duty on tonnage, for the purposes therein mentioned," so far as to enable the state of Pennsylvania to collect a duty of four cents per ton, on all vessels which shall clear out from the port of Philadelphia for any foreign port or place whatever, to be expended in building piers in, and otherwise improving the navigation of the river Delaware, agreeably to the intentions of the said act.

APPROVED, February 28, 1806.

STATUTE I.

Feb. 28, 1806.

CHAP. XIII.—*An Act for altering the time for holding the circuit court, in the district of North Carolina; and for abolishing the July term of the Kentucky district court.*

June term of the court changed.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the June term of the circuit court now holden for the district of North Carolina, on the fifteenth day of June, shall commence and be holden on the twentieth day of the same month, any thing contained in any former act or acts to the contrary notwithstanding.

Process made returnable accordingly.

And that all actions, suits, process, pleadings, and other proceedings of what nature or kind soever, civil or criminal, commenced or to commence in the said court; and all recognizances returnable to the said court on the fifteenth day of June, shall be continued, returned to, and have day in the session to be holden by this act, and the same proceedings shall be had thereon as heretofore, and shall have all the effect, power, and virtue as if the alteration had never been made: *Provided nevertheless*, that when the twentieth day of June shall happen on Sunday, the next shall be the first juridical day.

Altered 1807, ch. 5.

July district court of Kentucky abolished.

SEC. 2. *And be it further enacted,* That from and after the first day of August next, so much of all and every act or acts, as directs that a district court, for the Kentucky district, shall be holden on the first Monday in July, in every year, shall be, and the same is hereby repealed.

APPROVED, February 28, 1806.

STATUTE I.

March 8, 1806.

CHAP. XIV.—*An Act to extend jurisdiction in certain cases to state judges and state courts.*(a)

Jurisdiction given to certain state courts in cases of forfeitures and penalties under the revenue laws of the U. S.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the respective county courts within, or next adjoining the revenue districts herein after mentioned, shall be and are hereby authorized to take cognizance of all complaints and prosecutions for fines, penalties, and forfeitures, arising under the revenue laws of the United States, in the districts of Champlain, Sacket Harbor, Oswego, Gennessee, Niagara, and Buffaloe Creek, in the state of New York, and in the district of Presque Isle, in the state of Pennsylvania, and the district attornies of New York and Pennsylvania, respectively, are hereby authorized and directed to appoint, by warrant, an attorney as their substitute or deputy, respectively, to prosecute for the United States in each of the said county courts, who shall be sworn or affirmed to the faithful execution of his duty, as prosecutor aforesaid: *Provided*, that this authority shall not be construed to extend

1808, ch. 51.

(a) In the case of Prigg *v.* The Commonwealth of Pennsylvania, 16 Peters, 539, where the question presented to the court arose out of the proceedings of a magistrate of the commonwealth of Pennsylvania, under the law of Pennsylvania which interfered with the provisions of the act of Congress relating to the arrest of fugitives from labour, (act of February 12, 1793, chap. 7,) the magistrate of the state, having refused to execute the provisions of that law, the Court said, "As to the authority conferred on state magistrates by the fugitive law, while a difference of opinion exists, and may exist, on this point, in different states, whether state magistrates are bound to act under it; none is entertained by the court that state magistrates may, if they choose, exercise the authority, unless prohibited by the state legislatures." 16 Peters, 622.

jurisdiction to the county courts aforesaid, over any civil cause, which may arise in any of those revenue districts, for the collection of duties payable to the United States; or of bonds or securities given for the security and payment of duties to the United States.

Criminal jurisdiction in certain cases conferred upon the courts.

SEC. 2. *And be it further enacted*, That the county courts aforesaid, or the first judge of each of said courts, shall be, and hereby are further authorized to exercise all and every power in the cases of a criminal nature, cognizable before them by virtue of the first section of this act, for the purpose of obtaining a mitigation or remission of any fine, penalty, or forfeiture, which may be exercised by the judges of the district courts, in cases depending before them by virtue of the law of the United States, passed on the third of March, one thousand seven hundred and ninety-seven, intituled "An act to provide for mitigating or remitting the forfeitures, penalties, and disabilities, accruing in certain cases therein mentioned." And in the exercise of the authority, by this section given to said county courts, or to the first judges thereof, they shall be governed in every respect by the regulations, restrictions and provisoes of the law of the United States, passed on the third of March, one thousand seven hundred and ninety-seven, aforesaid; with this difference only, that instead of notifying the district attornies, respectively, said county courts, or the first judges thereof, as the case may be, shall, before exercising said authorities, cause reasonable notice to be given to the attorney who may have been appointed and sworn or affirmed to prosecute for the United States, in such court, that he may have an opportunity of showing cause against the mitigation or remission of such fine, penalty, or forfeiture.

Powers given by the act of March 3, 1797, ch. 13, for the remission of forfeitures, to the judges of state cou

Continuance of this act. Continued 1808, ch. 51.

SEC. 3. *And be it further enacted*, That this act shall remain in force during the term of one year, from its passage, and from thence to the end of the next session of Congress thereafter, and no longer. (*a*)

APPROVED, March 8, 1806.

STATUTE I.

March 8, 1806.

CHAP. XV.—*An Act declaring the town of Jersey, in the state of New Jersey, to be a port of delivery; and for erecting a Lighthouse on Wood Island, or Fletcher's neck, in the state of Massachusetts.*

Jersey, in the state of New Jersey, made a port of delivery.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the town, or landing place of Jersey, in the state of New Jersey, shall be a port of delivery, to be annexed to the district of Perth Amboy, and shall be subject to the same regulations and restrictions as other ports of delivery in the United States. And there shall be appointed a surveyor to reside at the said port of delivery, who shall be entitled to receive, in addition to the other emoluments allowed by law, a salary of one hundred dollars, annually.

1799, ch. 22, sec. 7.

Surveyor to reside at the said place.

A lighthouse to be erected on Wood island or on Fletcher's neck.

SEC. 2. *And be it further enacted*, That the Secretary of the Treasury shall be, and he is hereby authorized and required, to cause a good and sufficient lighthouse to be erected on Wood island, or on Fletcher's neck, in the district of Maine, (selecting either place, as the President of the United States may deem most eligible) and to appoint a keeper, and otherwise provide for such lighthouse, at the expense of the United States: *Provided*, that sufficient land for the accommodation of such lighthouse can be obtained at a reasonable price, and the legislature of Massachusetts shall cede the jurisdiction over the same to the United States. And the sum of five thousand dollars is hereby appropriated for the erection of said lighthouse, to be paid out of any monies in the treasury, not otherwise appropriated.

proviso.

APPROVED, March 8, 1806.

(*a*) By an act passed April 21, 1808, chap. 51, the provisions of this law are made perpetual and extended to the ports and harbors in Ohio.

WARRANTIES

SEC. 206. Section 203(a)(4) of the Clean Air Act is amended by striking "or" at the end of subparagraph (A), by striking the period at the end of subparagraph (B) and inserting a comma, and by adding the following new subparagraphs: 42 USC 7522.

"(C) except as provided in subsection (c)(3) of section 207, to provide directly or indirectly in any communication to the ultimate purchaser or any subsequent purchaser that the coverage of any warranty under this Act is conditioned upon use of any part, component, or system manufactured by such manufacturer or any person acting for such manufacturer or under his control, or conditioned upon service performed by any such person, *Infra.*

"(D) to fail or refuse to comply with the terms and conditions of the warranty under section 207(a) or (b) with respect to any vehicle.". *Ante*, p. 754; *Post*, p. 756.

CALIFORNIA WAIVER

SEC. 207. Section 209(b) of the Clean Air Act is amended to read as follows: 42 USC 7543.

"(b)(1) The Administrator shall, after notice and opportunity for public hearing, waive application of this section to any State which has adopted standards (other than crankcase emission standards) for the control of emissions from new motor vehicles or new motor vehicle engines prior to March 30, 1966, 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. No such waiver shall be granted if the Administrator finds that— Notice and hearing.

"(A) the determination of the State is arbitrary and capricious,

"(B) such State does not need such State standards to meet compelling and extraordinary conditions, or

"(C) such State standards and accompanying enforcement procedures are not consistent with section 202(a) of this part. *Post*, pp. 759, 760, 765, 791.

"(2) If each State standard is at least as stringent as the comparable applicable Federal standard, such State standard shall be deemed to be at least as protective of health and welfare as such Federal standards for purposes of paragraph (1).

"(3) In the case of any new motor vehicle or new motor vehicle engine to which State standards apply pursuant to a waiver granted under paragraph (1), compliance with such State standards shall be treated as compliance with applicable Federal standards for purposes of this title.".

MAINTENANCE INSTRUCTIONS

SEC. 208. Paragraph (3) of subsection (c) of section 207 of the Clean Air Act is amended to read as follows: 42 USC 7541.

"(3)(A) The manufacturer shall furnish with each new motor vehicle or motor vehicle engine written instructions for the proper maintenance and use of the vehicle or engine by the ultimate purchaser and such instructions shall correspond to regulations which the Administrator shall promulgate. The manufacturer shall provide in boldface type on the first page of the written maintenance instructions notice that maintenance, replacement, or repair of the emission control devices and systems may be performed by any automotive repair establishment or individual using any automotive part which has been certified as provided in subsection (a)(2). *Post*, p. 756.

"(B) The instruction under subparagraph (A) of this paragraph

Ante, p. 757.

(b) Section 203(a) of such Act, as amended by section 211 of this Act, is amended by adding the following at the end thereof: "Nothing in paragraph (3) shall be construed to require the use of manufacturer parts in maintaining or repairing any motor vehicle or motor vehicle engine. For the purposes of the preceding sentence, the term 'manufacturer parts' means, with respect to a motor vehicle engine, parts produced or sold by the manufacturer of the motor vehicle or motor vehicle engine.".

"Manufacturer parts."

(c) Section 205 of such Act is amended to read as follows:

"PENALTIES

42 USC 7524.
Ante, pp. 755, 761.
42 USC 7522.

"SEC. 205. Any person who violates paragraph (1), (2), or (4) of section 203(a) or any manufacturer, dealer, or other person who violates paragraph (3)(A) of section 203(a) shall be subject to a civil penalty of not more than $10,000. Any person who violates paragraph (3)(B) of such section 203(a) shall be subject to a civil penalty of not more than $2,500. Any such violation with respect to paragraph (1), (3), or (4) of section 203(a) shall constitute a separate offense with respect to each motor vehicle or motor vehicle engine.".

TESTING BY SMALL MANUFACTURERS

Regulations.
42 USC 7525.

SEC. 220. Section 206(a)(1) of the Clean Air Act is amended by adding at the end thereof the following: "In the case of any manufacturer of vehicles or vehicle engines whose projected sales in the United States for any model year (as determined by the Administrator) will not exceed three hundred, the regulations prescribed by the Administrator concerning testing by the manufacturer for purposes of determining compliance with regulations under section 202 for the useful life of the vehicle or engine shall not require operation of any vehicle or engine manufactured during such model year for more than five thousand miles or one hundred and sixty hours, respectively, but the Administrator shall apply such adjustment factors as he deems appropriate to assure that each such vehicle or engine will comply during its useful life (as determined under section 202(d)) with the regulations prescribed under section 202 of this Act.".

Ante, pp. 702, 751–753, 758–761; *Post*, pp. 765, 767, 769, 791.

PARTS STANDARDS; PREEMPTION OF STATE LAW

42 USC 7543.

SEC. 221. Section 209 of the Clean Air Act (relating to State standards) is amended by redesignating subsection (c) as (d) and by inserting after subsection (b) the following new subsection:

"(c) Whenever a regulation with respect to any motor vehicle part or motor vehicle engine part is in effect under section 207(a)(2), no State or political subdivision thereof shall adopt or attempt to enforce any standard or any requirement of certification, inspection, or approval which relates to motor vehicle emissions and is applicable to the same aspect of such part. The preceding sentence shall not apply in the case of a State with respect to which a waiver is in effect under subsection (b).".

Ante, p. 756.

TESTING OF FUELS AND FUEL ADDITIVES

Regulations.
42 USC 7545.

SEC. 222. (a) Section 211 of the Clean Air Act is amended by adding the following new subsections at the end thereof:

"(e)(1) Not later than one year after the date of enactment of this subsection and after notice and opportunity for a public hearing, the

proportion of the metropolitan division's high incidence bonus if this area in New Jersey also has a higher than average per capita incidence of AIDS. The State of New Jersey shall use amounts allocated to the State under this subsection to carry out eligible activities under section 855 of the AIDS Housing Opportunity Act (42 U.S.C. 12904) in the portion of the metropolitan division that is located in New Jersey.

North Carolina.

(b) Notwithstanding any other provision of law, the Secretary of Housing and Urban Development shall allocate to Wake County, North Carolina, the amounts that otherwise would be allocated for fiscal year 2012 under section 854(c) of the AIDS Housing Opportunity Act (42 U.S.C. 12903(c)) to the city of Raleigh, North Carolina, on behalf of the Raleigh-Cary North Carolina Metropolitan Statistical Area. Any amounts allocated to Wake County shall be used to carry out eligible activities under section 855 of such Act (42 U.S.C. 12904) within such metropolitan statistical area.

(c) Notwithstanding section 854(c) of the AIDS Housing Opportunity Act (42 U.S.C. 12903(c)), the Secretary of Housing and Urban Development may adjust the allocation of the amounts that otherwise would be allocated for fiscal year 2012 under section 854(c) of such Act, upon the written request of an applicant, in conjunction with the State(s), for a formula allocation on behalf of a metropolitan statistical area, to designate the State or States in which the metropolitan statistical area is located as the eligible grantee(s) of the allocation. In the case that a metropolitan statistical area involves more than one State, such amounts allocated to each State shall be in proportion to the number of cases of AIDS reported in the portion of the metropolitan statistical area located in that State. Any amounts allocated to a State under this section shall be used to carry out eligible activities within the portion of the metropolitan statistical area located in that State.

Budget.

SEC. 210. The President's formal budget request for fiscal year 2013, as well as the Department of Housing and Urban Development's congressional budget justifications to be submitted to the Committees on Appropriations of the House of Representatives and the Senate, shall use the identical account and sub-account structure provided under this Act.

State listing.

SEC. 211. A public housing agency or such other entity that administers Federal housing assistance for the Housing Authority of the county of Los Angeles, California, the States of Alaska, Iowa, and Mississippi shall not be required to include a resident of public housing or a recipient of assistance provided under section 8 of the United States Housing Act of 1937 on the board of directors or a similar governing board of such agency or entity as required under section (2)(b) of such Act. Each public housing agency or other entity that administers Federal housing assistance under section 8 for the Housing Authority of the county of Los Angeles, California and the States of Alaska, Iowa and Mississippi that chooses not to include a resident of public housing or a recipient of section 8 assistance on the board of directors or a similar governing board shall establish an advisory board of not less than six residents of public housing or recipients of section 8 assistance to provide advice and comment to the public housing agency or other administering entity on issues related to public housing and section 8. Such advisory board shall meet not less than quarterly.

Meetings.

Transfer authority.

SEC. 212. (a) Notwithstanding any other provision of law, subject to the conditions listed in subsection (b), for fiscal years 2012

State of California

HEALTH AND SAFETY CODE

Section 39038

39038. "Model year" means the manufacturer's annual production period which includes January 1 of a calendar year or, if the manufacturer has no annual production period, the calendar year.

In the case of any vehicle manufactured in two or more stages, the time of manufacture shall be the date of completion of the chassis.

(Added by Stats. 1975, Ch. 957.)

H.R. REP. 94-340, H.R. Rep. No. 340, 94TH Cong., 1ST Sess. 1975, 1975 U.S.C.C.A.N. 1762, 1975 WL 12469 (Leg.Hist.)

**1762 P.L. 94-163, ENERGY POLICY AND CONSERVATION ACT

Senate Report (Interior and Insular Affairs Committee) No. 94-26,
Mar. 5, 1975 (To accompany S. 622)
Senate Report (Commerce Committee) No. 94-253,
June 24, 1975 (To accompany S. 349)
Senate Report (Interior and Insular Affairs Committee) No. 94-260,
June 26, 1975 (To accompany S. 677)
Senate Report (Commerce Committee) No. 94-179,
June 5, 1975 (To accompany S. 1883)
House Report (Interstate and Foreign Commerce Committee) No. 94-340,
July 9, 1975 (To accompany H.R. 7014)
Senate Conference Report No. 94-516,
Dec. 9, 1975 (To accompany S. 622)
House Conference Report No. 94-700,
Dec. 9, 1975 (To accompany S. 622)
Cong. Record Vol. 121 (1975)
DATES OF CONSIDERATION AND PASSAGE
Senate April 10, July 8, 11, and 15, September 26, December 17, 1975 House September 23, December 15, 1975
S. 622 was passed in lieu of the House bill after substituting for its language much of the
text of the House bill. The House Report and the Senate Conference Report are set out.

(CONSULT NOTE FOLLOWING TEXT FOR INFORMATION ABOUT OMITTED MATERIAL. EACH COMMITTEE REPORT IS A SEPARATE DOCUMENT ON WESTLAW.)

HOUSE REPORT NO. 94-340

July 9, 1975

*1 The Committee on Interstate and Foreign Commerce, to whom was referred the bill (H.R. 7014) to increase domestic energy supplies and availability; to restrain energy demand; to prepare for energy emergencies; and for other purposes, having considered the same, report favorably thereon with an amendment and recommend that the bill as amended do pass.

* * * *

**1763 I. PURPOSE

This legislation is directed to the attainment of the collective goals of increasing domestic supply, conserving and managing energy demand, and establishing standby programs for minimizing this nation's vulnerability to major interruptions in the supply of petroleum imports. The energy policies which its terms define are tempered by current economic concerns and the compelling need to restore economic health as rapidly as is possible.

In brief, the bill would apply price controls to the entirety of domestic crude oil production in an attempt to restore elements of reason to a marketplace whose mechanisms are made to counteract the influence of cartel pricing and to insulate our economy at least in part from further sharp inflationary increases in petroleum prices.

The bill would also establish regulatory programs to bring about measured savings in consumption of energy by improving the efficiency of the products we use and the cars we drive. Targeted goals for bettering industrial efficiencies are provided. And a gasoline savings program is established which makes use of allocation and supply controls to prevent growth in gasoline consumption over the next three years and, where practicable, to reduce existing demand levels by an additional 2 to 4 percent.

Subsection (h) directs the FEA Administrator to conduct continuing evaluations of the manufacturers' progress in achieving the energy efficiency targets, and requires him to prepare and transmit to the Congress and the President, at least annually, a report summarizing such progress, identifying those who are not making satisfactory progress, stating how much improvement in their energy efficiency could result from compliance with the energy efficiency targets, and presenting the Administrator's recommendations for legislative or other action.

Section 454 directs the FEA Administrator, within 90 days after the President signs the Act, to publish guidelines for the efficient use and conservation of petroleum products, gas and electricity by any facility using any process or equipment specified in the Act, and to revise those guidelines as technology and alternatives change. In establishing or revising the guidelines, the Administrator must hold hearings in compliance with the Administrative Procedure Act (5 USC 553), and must consider the economic, environmental and energy effects of the guidelines.

Section 455 is designed to ascertain the extent to which, if any, any achievement of the targets or guidelines under this Part B may affect employment. This section, which is similar to that contained in sections 507(e) of the Federal Water Pollution Control Act (Public Law 92-500; 33 U.S.C.Supp. III, Sec. 1367(e)), directs the FEA Administrator to conduct continuing evaluations of potential loss or shifts in employment which may result from such achievement under this Part B. He is specifically directed to investigate threatened plant closures or reductions in employment allegedly resulting from such achievement. This section also specifically provides that if an employee is discharged or laid off, or threatened with discharge or layoff, or otherwise discriminated against by anyone because of the alleged results of such achievement under this Part B, such employee (or his or her representative) may request the FEA to investigate the matter. Upon receiving such request, the Administrator must proceed to investigate ****1848** the matter, and may hold a public hearing, on not less than 5 days' notice, on the record and in accordance with the provisions of the ***86** Administrative Procedure Act (5 U.S.C. section 553). At such hearings, the Administrator shall require the parties, including the employer involved, to present information concerning the actual or potential effect of such achievement on employment and any alleged discharge, layoff or other discrimination, and also make such recommendations as he deems appropriate. The report, findings and recommendations would be available to the public. This investigation, hearing and reporting procedure would be advisory in nature, and would not require the Administrator to modify or withdraw any guidelines or targets which was the alleged reason for the events or threats investigated.

I. AUTOMOBILE FUEL EFFICIENCY (TITLE V, PART A)

BACKGROUND

Motor Vehicle Fuel Consumption

In 1972, motor vehicles accounted for almost 20 percent of all energy consumed in the United States, and about 40 percent of all petroleum products consumed in the United States. Improving motor vehicle fuel economy can have a substantial impact on petroleum consumption by 1980, and an even larger impact by 1985.

For example, the joint Department of Transportation-- Environmental Protection Agency study ‘Potential for Motor Vehicle Fuel Economy Improvement ‘ found that an increase in average fuel economy of model year 1980 automobiles to 20 miles per gallon (a 44 percent improvement over 1974) would result in automobiles' consuming 1.2 million barrels per day less petroleum than they would if there had been no improvement. If average fuel economy reached 26 MPG by model year 1985 (an 85 percent improvement), automobile fuel consumption would be reduced by 3 million barrels per day.

Potential for Improvement

The Environmental Protection Agency's data indicates that sales-weighted fuel economy for the 1975 model year has increased 12.2 percent over 1974. The DOT-EPA study of the potential for motor vehicle fuel economy improvement indicates that with technological improvements and use of smaller engines but without any shift to smaller cars, sales-weighted fuel

economy of automobiles sold in 1980 could reach 20.3 MPG (a 45 percent increase over 1974). If the maximum feasible shift to small cars occurred, sales-weighted fuel economy could reach 22.2 MPG in 1980 (a 59 percent increase above 1974). The study assumed, for purposes of these projections, that these levels of fuel economy could be achieved without any reduction in the stringency of the statutory hydrocarbon (HC) and carbon monoxide (CO) emission standards which are scheduled to be effective in 1978.

Emission Standards

The effects of emission controls on fuel economy are particularly difficult to assess. According to an EPA study, sales-weighted fuel economy for passenger motor vehicles sold in the United States increased 13.8 percent between model year 1974 and model year 1975, although ****1849 *87** permissible emissions of carbon monoxide and hydrocarbons from motor vehicles sold outside California were approximately halved. The change in fuel economy is principally attributable to installation of catalytic converters on about 85 percent of cars sold outside of California and virtually all cars sold in California. The 1975 California standards, which require a further reduction in emissions of about 1/3 from the 49-State standards, appear to result in a 5.7 percent fuel penalty relative to automobiles subject to the 49-State standards-- though this penalty varies widely from manufacturer to manufacturer. The EPA decision on the suspension of the 1978 emission standards estimates that the implementation of the statutory CO and HC standards (those required under current law for 1978) would result in a 5-10 percent fuel penalty, from the 1975 level. Manufacturers' submissions in the suspension proceeding projected a 15 percent fuel penalty. Meeting the statutory HC and CO standards in 1980 would result in a 5 percent fuel penalty in 1980 according to informally received information from DOT. EPA's position appears to be that no fuel penalty will be required in 1980.

Need

The Administration has obtained written (but not legally enforceable) understandings from certain domestic manufacturers and importers to increase fuel economy of their automobiles by 40 percent above the 1974 level. The understanding is conditioned on Congress' agreeing to a five-year freeze in emission and safety standards. The Committee feels that the necessity for insuring major improvements in automobile fuel economy is so clear that legally enforceable requirement respecting improvement of fuel economy must be imposed. At the same time, the Committee recognizes that the automobile industry has a central role in our national economy and that any regulatory program must be carefully drafted so as to require of the industry what is attainable without either imposing impossible burdens on it or unduly limiting consumer choice as to capacity and performance of motor vehicles. The Committee has devised the regulatory program, which appears in Part A of the bill, requiring each manufacturer to meet an average fuel economy standard beginning in model year 1978.

Prior Action by the House

The automobile fuel economy provisions of H.R. 7014, as introduced, were offered as a Floor amendment to H.R. 6860, on June 12, 1975. The amendment was agreed to by a vote of 306 to 86. Part A of title V of H.R. 7014 as reported is (with one exception) substantively identical to part 1 of title III of H.R. 6860 as passed by the House. The one substantive change consists of a modification of the procedure for adjusting fuel economy standards to reflect more stringent emissions standards (Under the reported bill, no adjustment can be made unless the more stringent emissions standards resulted in a reduction in fuel economy of more than 1 MPG). The automobile fuel economy provisions have been retained in the bill in order to ensure that the House position on automobile fuel economy can be considered in conference in the eventually that the Senate amends H.R. 7014 to add automobile ****1850 *88** fuel economy provisions and the conference on H.R. 7014 occurs before before the conference on H.R. 6860.

GENERAL EXPLANATION

Part B of title V of the bill established a long range program for improving automobile fuel economy by requiring manufacturers and importers to meet increasingly stringent average fuel economy standards, and to disclose the fuel economy of each new automobile sold in the United States.

Average Fuel Economy Standards

The Committee, in setting the statutory average fuel economy standards for passenger automobiles, gave careful consideration to the EPA-DOT study's conclusion that a 63 percent improvement in average fuel economy levels between 1974 and 1980 (to 22.2 MPG) was the maximum potential improvement in average fuel economy. This projection was on an industry-wide basis and was not a level which each manufacturer necessarily could be expected to reach; it assumed the maximum shift to smaller cars which was technologically feasible, and it appeared to assume that there would be no reduction in fuel economy associated with more stringent emissions standards. The Committee, in translating this industry-wide potential average fuel economy projection into an average fuel economy standard which each manufacturer must attain, was of the view that any emission standards likely to be in effect in 1980 would involve at least a 5 percent reduction (1 MPG) in average fuel economy in 1980. [11] In addition, because of the likelihood that in that year a number of smaller manufacturers are likely to ‘overachieve‘ (have an average fuel economy in excess of the industry-wide target), the Committee felt it could set a standard for each manufacturer which was somewhat lower than the industry-wide target. In light of these considerations, the Committee set the average fuel economy standard for each manufacturer at 20.5 MPG for model year 1980. The model year 1978 and 1979 standards were set at 2 MPG and 1 MPG, respectively, below the 1980 standard.

The 1985 average fuel economy standard presented a different problem because of the high level of uncertainty which attends any attempt to predict technological feasibility a decade into the future. The Committee in this instance set the standard at the highest potential level of fuel economy (28 MPG) which any of the studies available to the Committee indicated was attainable, but provided that the standard could be modified administratively (subject to Congressional veto) on the basis of information which becomes available in the next five years. It is the Committee's hope that this procedure will provide the industry with a clear target for 1985 while at the same time providing the program with the necessary flexibility.

Passenger Automobiles

Section 502(a)(1) requires that the average fuel economy of all passenger automobiles manufactured by any manufacturer in any ***89 **1851** model year after model year 1977 not be less than the number of miles per gallon determined under the following table:

TABULAR OR GRAPHIC MATERIAL SET FORTH AT THIS POINT IS NOT DISPLAYABLE

The Secretary must establish not later than July 1, 1977, average fuel economy standards for new automobiles manufactured in model years 1981 through 1984. These standards are to be set for each such model year at a level which the Secretary determines is the maximum feasible level (but not less than 20.5 MPG) and which will result in steady progress toward meeting an average fuel economy level for model year 1985 (28 MPG, unless modified under section 502(a)(4)).

The Secretary is authorized to amend any average fuel economy performance standard established for any of the 1981-1984 model years but no such amendment may reduce the standard for average fuel economy below 20.5 MPG.

Annually, beginning in 1977, the Secretary is required to review average fuel economy standards which will take effect in future model years, publish the results of such review in the Federal Register, and transmit it to the Congress. The 1970 review must include a comprehensive analysis of the fuel economy standards program and an assessment of the ability of manufacturers to meet the average fuel economy requirements for model year 1985.

The Secretary is authorized, if he finds that the model year 1985 average fuel economy standard of 28 MPG should be modified because such level is not the maximum feasible average fuel economy level, to modify such standard to a level that represents the maximum feasible average fuel economy level. Such modification can be disapproved by either House of Congress in accordance with the 15-day Congressional review procedure under section 751 of the bill.

Section 502(a)(b) spells out factors to be considered in determining the maximum feasible average fuel economy. The factors are technological feasibility, economic practicality, relationship to other Federal motor vehicle standards (except as otherwise provided in section 502(d)(4), and the purposes of the Act.

The standards under section 502(a) apply only to passenger automobiles-- defined under section 501(2) as an automobile which is manufactured primarily for use in the transportation of not more than ten individuals. Automobiles other than passenger automobiles are excluded from the average fuel economy standards under section 502(a), but under section 502(b) the Secretary is directed to establish separate standards for non-passenger automobiles. This category includes all automobiles (defined under section 501(2) as 'any four-wheeled vehicle propelled by fuel which is manufactured primarily for use on public streets, roads, and highways and which is rated at ***90 **1852** 10,000 pounds gross vehicle weight or less') other than those defined as passenger automobiles. The effect of the definitional scheme of the bill is to exclude entirely vehicles not manufactured primarily for highway use (e.g., agricultural and construction equipment, and vehicles manufactured primarily for off-road rather than highway use) and vehicles rated at more than 10,000 pounds gross vehicle weight (that is, most buses and heavy duty trucks). If a vehicle is not excluded entirely, then it is subject to standards either as a passenger automobile or as a nonpassenger automobile. The passenger automobile category would exclude vehicles not manufactured primarily for transportation of individuals-- such as light duty trucks, mobile homes, and multi-purpose vehicles not manufactured primarily for transportation of individuals. The classification of vehicles under the bill would be done by the Secretary of Transportation in a rulemaking proceeding.

Automobiles Other Than Passenger Automobiles

Section 502(b) requires the Secretary to prescribe average fuel economy standards for all automobiles, other than passenger automobiles, manufactured by any manufacturer in any model year after the first model year which begin more than 30 months after enactment. Separate standards for different classes of nonpassenger automobiles may be provided. Standards for these nonpassenger automobiles must be based upon the maximum feasible average fuel economy level which the Secretary determines manufacturers of such automobiles or classes thereof are able to achieve in each model year.

Small Manufacturers

Section 502(c) provides a procedure by which a manufacturer, whose world-wide annual production is less than 10,000, may obtain an exemption from the standards for passenger automobiles under section 502(a). Whenever the Secretary issues such an exemption, he is required to establish alternative average fuel economy standards for such manufacturer which represent the maximum feasible average fuel economy level for such manufacturer's production of passenger automobiles. A small manufacturer's production of non-passenger automobiles would be subject to the standard under section 502(b), and the exemption procedure under section 502(c) would not be applicable to his non-passenger automobiles. However, the Secretary could, in setting standards for classes of non-passenger automobiles, establish separate classes for types of non-passenger automobiles manufactured by small manufacturers.

Adjustment To Reflect More Stringent Emissions Standards

Faced with the current uncertainty as to the level of future emissions standards and their effects on fuel economy, the Committee, as noted above, assumed for purposes of setting the statutory average fuel economy standards for model years 1978-1980 that more stringent emission standards in those years would result in a reduction in industry-wide average fuel economy of at least 1 MPG. In order to take account of the possibility that more stringent emission standards would result in

an even greater reduction in average fuel economy, the Committee provided a mechanism for adjusting downward the average fuel economy standards for passenger automobiles.

**1853 *91 Section 502(d) requires the Secretary, if he determines that in any model year there will be an emission standards penalty in excess of 1 MPG, to adjust the average fuel economy standards applicable to such year by subtracting a number of miles per gallon equal to the amount by which such penalty exceeds 1 MPG. 'Emission standards penalty' is defined as the number of miles per gallon which the Secretary determines is equal to (i) the average fuel economy which all passenger automobiles manufactured in the model year would achieve, if such automobiles were subject only to the 1975 Federal emission standards, less (ii) the average fuel economy which all such automobiles are likely to achieve while meeting the emission standards actually applicable to such automobiles. It should be noted that this determination is on an industry-wide basis, rather than on a manufacturer-by-manufacturer basis.

The Secretary is required to commence a proceeding under section 502(d) on petition of any manufacturer, but such petition may be filed only with the 18-month period preceding the beginning of the model year. A decision in such a proceeding must be rendered within 60 days after the filing of the petition. More than one proceeding may be commenced with respect to the same model year.

Section 502(d)(4) prohibits the Secretary from changing average fuel economy standards for passenger automobiles (other than those produced by smaller manufacturers) to take account of any decrease in fuel economy associated with emissions standards, except in accordance with the procedure under section 502(d).

Determination of Average Fuel Economy

Average fuel economy (except when used with nonpassenger automobiles) is a production-weighted average of the fuel economy of the manufacturer's entire production of passenger automobiles in a model year (subject to the special rules for imports). It is intended that the rules of the Secretary would provide for a similar computation for each class of non-passenger automobile.

'Fuel economy' is defined as the average number of miles traveled by an automobile per gallon of fuel consumed, determined in accordance with test procedures established under section 503.

Importers are subject to the average fuel economy standards as if their imports into the United States were domestically manufactured. A special rule applies to companies which are both importers and domestic manufacturers. Under section 503(b), EPA is required in calculating the average fuel economy to separate each such manufacturer's production into two categories:

(A) Passenger automobiles manufactured in the United States or Canada by such manufacturer.

(B) Passenger automobiles manufactured outside the United States or Canada.

Each category is treated as manufactured by a separate manufacturer for purposes of this part.

An automobile is considered to be manufactured in the United States or Canada if at least 75 percent of the cost of the manufacturer is attributable to value added in the United States or Canada.

Compliance by a manufacturer with applicable average fuel economy standards is to be determined in accordance with test procedures established **1854 *92 by the EPA Administrator by rule. Test procedures so established would be the procedures utilized by the EPA Administrator for model year 1975, or procedures which yield comparable results. The words 'or procedures which yield comparable results' are intended to give EPA wide latitude in modifying the 1975 test procedures to achieve procedures that are more accurate or easier to administer, so long as the modified procedure does not have the effect

H.R. REP. 102-474(I), H.R. REP. 102-474, H.R. Rep. No. 474(I), 102ND Cong., 2ND Sess. 1992, 1992 U.S.C.C.A.N. 1954, 1992 WL 92925 (Leg.Hist.)

**1953 P.L. 102-486, ENERGY POLICY ACT OF 1992

COMPREHENSIVE NATIONAL ENERGY POLICY ACT

DATES OF CONSIDERATION AND PASSAGE

House: May 20, 21, 27, October 5, 1992

Senate: February 5, 6, 7, 18, 19, July 29, 30, October 5, 8, 1992

Cong. Record Vol. 138 (1992)

House Report (Energy and Commerce Committee) No. 102-474(I), March 30, 1992 (To accompany H.R. 776)

House Report (Science, Space and Technology Committee) No. 102-474(II), May 1, 1992 (To accompany H.R. 776)

House Report (Public Works and Transportation Committee) No. 102-474(III), May 1, 1992 (To accompany H.R. 776)

House Report (Foreign Affairs Committee) No. 102-474(IV), May 4, 1992 (To accompany H.R. 776)

House Report (Government Operations Committee) No. 102-474(V) May 5, 1992 (To accompany H.R. 776)

House Report (Ways and Means Committee) No. 102-474(VI), May 5, 1992 (To accompany H.R. 776)

House Report (Judiciary Committee) No. 102-474(VII), May 5, 1992 (To accompany H.R. 776)

House Report (Interior and Insular Affairs Committee) No. 102-474(VIII), May 5, 1992 (To accompany H.R. 776)

House Report (Merchant Marine and Fisheries Committee) No. 102-474(IX), May 5, 1992 (To accompany H.R. 776)

**1954 House Conference Report No. 102-1018, October 5 ,1992 (To accompany H.R. 776)

HOUSE REPORT NO. 102-474(I)

March 30, 1992

[To accompany H.R. 776]

The Committee on Energy and Commerce, to whom was referred the bill (H.R. 776) to provide for improved energy efficiency, having considered the same, report favorably thereon with an amendment and recommend that the bill as amended do pass.

CONTENTS

Second, FERC's earlier broad authority to grant some "fast track" pipeline approvals is fully restored. This authority helped **1959 create a national pipeline grid during the 1980's, by encouraging hookups between gas-short interstate lines and gas-glutted intrastate lines, and was available for years to nearly all segments of the industry-including gas-fired cogenerators and auto plants, for example.

Third, FERC is given a new "fast track" procedure for "at risk" pipelines: In these cases, the pipelines agrees to forego a guaranteed, cost-plus profit and does not spread the line's costs among its other utility customers. Instead, it charges only new buyers who willingly agree to pay for and use the new line. This "consenting adult" approach justifies a speedier, more automatic FERC approval. Full environmental review rules still apply to these lines.

Other natural gas provisions also simplify some environmental procedures; protect residential consumers against any shifting of costs of take-or-pay contract settlements that might result from industrial customers bypassing a local utility for cheaper direct service from a pipeline; speed the issuance and review of FERC orders; streamline replacement pipelines and "priority projects"; allow faster supply area hookups that don't hurt existing customers; and give local utilities new rights to require "carriage gas" hookups, similar to their existing power to gain "merchant gas" hookups.

ALTERNATIVE FUELS

The alternative fuels provisions aim at our nation's largest oil problem area: the nearly 200 million cars and trucks on U.S. highways that each day consume a volume of fuel equalling all our oil imports, or about one-seventh of the entire world's oil production.

The provisions accelerate the demonstration and use of alternative fuels and the removal of market imperfections, but allow the Department of Energy, state and local governments, and the free market substantial leeway in choosing among alternatives.

All alternative fuels, including at a minimum methanol, ethanol, ethers, natural gas, propane, and electricity, will compete on a level playing field. They have different strengths, weaknesses, prices, emissions, and regional niches, but share four drawbacks: (1) nearly all cost more than today's cheap gasoline; (2) most also need companion investments in relatively costly new production plants, fuel station networks, cars, or engines; (3) the big new investments must "match up," because ethanol plants and natural gas service stations won't fill up methanol buses; and (4) there is a chicken-and-egg problem: Mass demand for a new fuel, fuel network, and car won't occur until all three are widespread and fairly cheap-which in turn will not happen until mass demand arises for the car/fuel/station combination.

These problems, the uncertain future prices of these fuels, their uncertain emissions characteristics, and our unhappy synthetic *137 fuels experience in the last decade, all argue against a massive crash program. We are not ready to "pick the winning alternative fuel," and cannot afford costly errors.

**1960 But we are ready for near-term, large-scale pilot programs that get data on real world costs and demonstrate consumer acceptance, as well as a bigger, more cost-effective move off oil at the end of this decade.

Recent laws, such as the 1990 Clean Air Act Amendments and the Alternative Motor Fuels Act of 1988, are already pushing us in this direction. The California Pilot Program, other states' decisions to opt in to low emission vehicle programs, this coming Autumn's move to oxygenated gasoline, state laws promoting ethanol or Compressed Natural Gas buses, the Federal government's efforts to buy alternative fueled cars-all these are moving us toward non-oil motor fuels.

The alternative fuels provisions build on all these existing initiatives, and add new ones, including myriad incentives for fuel and vehicle production and purchase, as well as some carefully targeted requirements.

There are five major alternative fuel provisions. The first sets a U.S. goal of 10% alternative fuel use by 2000, and 30% by 2010. The Secretary of Energy must use existing and new authorities and incentives to attain these goals.

The second is a 1994 requirement that alternative fuel providers buy alternative fueled vehicles and use alternative fuels in them. Imposing this mandate on these providers-businesses like gas and electric utilities who will profit most if alternative fuels really take off-will create a workable, cost-effective testbed for alternative fuels and can ultimately lead to acceptance of these fuels and vehicles by the public.

The third provision is a Federal fleet purchase program starting at 10% of new government vehicles in 1993 and increasing to 50% in 1998, with additional increases possible in the outyears; this will establish the Federal government as a market leader.

The fourth establishes a non-Federal fleet program that may result in vehicle purchase provisions for fleets of 10 or more vehicles, starting at 20% of vehicle purchases in 2002 and ramping up to 70% in 2005. The program is triggered if the Secretary of Energy finds that such a program is necessary to achieve the overall alternative fuel goals of 10% non-oil use in the year 2000 and 30% by the year 2010.

The bill also authorizes a commercial demonstration program for electric vehicles, including discount payments to reduce the initial price differential between electric vehicles and comparable conventionally fueled vehicles as well as joint ventures for supporting infrastructure.

Many other incentives and programs in the bill will encourage alternative fuels and alternative fueled vehicles, including a low-interest loan program for small business fleets to cover the incremental costs of alternative fueled vehicles, Federal certification for training programs for converting vehicles to alternative fuel capability, and less regulation of compressed natural gas stations.

****1961 *138** ELECTRICITY

The bill's electricity provisions will promote additional competition in wholesale electricity power market in order to improve the efficiency of the electric utility industry and secure the lowest possible costs for consumers.

While the U.S. electricity system has served the country well in terms of reliability of service and meeting load growth, it is clear that the recent emergence of competition in the generation sector has been beneficial to consumers and should be further encouraged. New demand for electricity is projected. While some of this will be met by traditional utility construction of large baseload facilities, many utilities are supplementing the power they produce with wholesale (or “bulk”) purchases of electricity generated by others.

This growing reliance by utilities on wholesale power purchases is attributable to several factors. First, many utilities were introduced to purchased power as a result of the Public Utility Regulatory Policies Act of 1978 (PURPA). PURPA facilitated the emergence of independent power producers (IPPs), entities which produce electricity but are distinguished from utilities in that they do not transmit or distribute power to consumers. While PURPA was intended primarily to encourage renewable power and cogeneration, it also demonstrated the viability of independently generated power.

During the 1980's, as state regulatory commissions were setting prices for PURPA power, they also sought to influence utilities' power supply choices through innovative programs. State “least cost planning” and “competitive bidding” programs not only affected the mix of utilities' power supplies, but also put pressure on utilities to keep electricity rates at the lowest reasonable level.

In many cases, utilities found wholesale power purchases useful in meeting these new regulatory requirements. Sometimes the power was purchased from other utilities who had excess generating capacity available to produce power for resale on

H.R. REP. 102-474(II), H.R. REP. 102-474, H.R. Rep. No. 474(II), 102ND Cong., 2ND Sess. 1992, 1992 U.S.C.C.A.N. 2064, 1992 WL 101229 (Leg.Hist.)
**2064 P.L. 102-486, ENERGY POLICY ACT OF 1992

*1 COMPREHENSIVE NATIONAL ENERGY POLICY ACT

DATES OF CONSIDERATION AND PASSAGE

House: May 20, 21, 27, October 5, 1992
Senate: February 5, 6, 7, 18, 19, July 29, 30, October 5, 8, 1992
Cong. Record Vol. 138 (1992)
House Report (Energy and Commerce Committee) No. 102-474(I),
March 30, 1992 (To accompany H.R. 776)
House Report (Science, Space and Technology Committee) No. 102-474(II),
May 1, 1992 (To accompany H.R. 776)
House Report (Public Works and Transportation Committee) No. 102-474(III),
May 1, 1992 (To accompany H.R. 776)
House Report (Foreign Affairs Committee) No. 102-474(IV),
May 4, 1992 (To accompany H.R. 776)
House Report (Government Operations Committee) No. 102-474(V)
May 5, 1992 (To accompany H.R. 776)
House Report (Ways and Means Committee) No. 102-474(VI),
May 5, 1992 (To accompany H.R. 776)
House Report (Judiciary Committee) No. 102-474(VII),
May 5, 1992 (To accompany H.R. 776)
House Report (Interior and Insular Affairs Committee) No. 102-474(VIII),
May 5, 1992 (To accompany H.R. 776)
House Report (Merchant Marine and Fisheries Committee) No. 102-474(IX),
May 5, 1992 (To accompany H.R. 776)
House Conference Report No. 102-1018,
October 5 ,1992 (To accompany H.R. 776)

HOUSE REPORT NO. 102–474(II)

May 1, 1992
[To accompany H.R. 776]

The Committee on Science, Space, and Technology, to whom was referred the bill (H.R. 776) to provide for improved efficiency, having considered the same, report favorably thereon with amendments and recommend that the bill as amended do pass.

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The bill also calls for a research, development, and demonstration program on the cofiring of natural gas with coal in utility and large industrial boilers in order to determine optimal natural gas injection levels for both environmental and operational benefits. The Committee authorizes $300 million for the Natural Gas/Supply program.

SUBTITLE B–OIL AND GAS DEMAND REDUCTION AND SUBSTITUTION

The Nation's prosperity and energy security is inextricably linked to the efficient transportation and mobility of its people, goods and services. Of the 82 quads (quadrillion Btu's) of total U.S. energy use in 1991, 22 quads, 27 percent of the total, were used in the transportation sector.

**2094 *87 This sector is almost entirely dependent on petroleum for its needs–97 percent of U.S. transportation energy consumption is petroleum-based. The quantity of petroleum used for transportation has exceeded our total domestic production every year since 1976 and accounts for almost two-thirds of U.S. petroleum consumption.

The Department of Energy projects that energy use in the transportation sector will continue to grow at approximately 2 percent per year. This projected energy consumption would greatly increase our dependence on foreign sources of oil. The President's 1991 National Energy Strategy report indicated that the United States could face an increase in imports from 42 percent of current supply to 65 percent by the year 2010. The Energy Information Administration recently predicted the possibility of imports rising to between 53 and 69 percent by 2010.

Current energy consumption in the transportation sector exacerbates air pollution problems in metropolitan areas. The transportation sector accounts for 66 percent of carbon monoxide emissions and 21 percent of particulates. It also contributes 35 percent of volatile organic compounds and 40 percent of nitrogen oxides, the precursors to formation of ground-level ozone and smog. The Office of Technology Assessment, in its 1991 report, “Changing by Degrees: Steps to Reduce Greenhouse Gases,” indicated that transportation emissions contribute about 32 percent of total U.S.-generated greenhouse gases.

The severity of environmental pollution in the transportation sector has prompted significant action by States to introduce less-polluting vehicles. State and local organizations in California took the lead in establishing emissions control programs to force large-scale use of alternative-fueled vehicles. The action by California was the first to require that at least two percent of annual California car sales be zero emission vehicles by 1998. A number of other States are reviewing and adopting the California standards. This degree of State action provides a significant opportunity for the Federal government to conduct collaborative research to develop the technologies needed for the mid-to-late 1990s.

Given the significant current and projected energy needs and environmental impacts, the Committee believes it is imperative to establish demand reduction and fuel-substitution technologies that will reduce our dependence on petroleum and encourage the use of cleaner, less-polluting or nonpolluting fuels.

Sec. 2021. General Transportation Research, Development, and Demonstration Program

The General Transportation Research, Development, and Demonstration Program section directs the Secretary of Energy to conduct a program to reduce the demand for oil in the transportation sector, including field demonstrations to prove technical and economic viability. The program authorized in this section includes ongoing research, development and demonstration at the Department of Energy relating to transportation technologies and transportation-related biofuels. Selected activities that augment ongoing programs or establish new program elements are addressed in Sections 2022 through 2027. The Committee authorizes $1.1 billion for **2095 *88 activities conducted under Sections 2021 through 2027 for the period fiscal year 1993 through fiscal year 1997, excluding Section 2025, which addresses electric vehicles. Section 2025 contains specific annual authorization levels for the period 1993 through 1998.

The General Transportation Research, Development, and Demonstration Program requires the Secretary of Energy to establish a program plan to guide the research and development efforts. The Committee believes that such a plan will help structure and identify out-year activities and programs beyond the annual data presented in the Department's Budget Request submitted by the President. Any such plan shall include a level of narrative and budgetary detail for planned activities at the Subprogram level.

Sec. 2022. Advanced Automotive Fuel Economy

Greater fuel economy in automobiles and light trucks can play a crucial role in strengthening U.S. energy security by reducing energy demand and limiting dependence on imported oil. Fuel economy can also lead to reduced emissions of carbon dioxide and air pollutants. Today's new light duty passenger vehicles are significantly more fuel-economical than those produced before the energy crises of the 1970s. Since 1974 the average fuel economy of new passenger cars in the United States has doubled.

At a Subcommittee on Environment hearing on “Automotive Technologies for Fuel Economy,” held on October 2, 1991, witnesses representing the automobile industry indicated that current internal combustion engine technologies and vehicle design improvements that are available commercially on some models have the potential to enhance overall fuel economy still further if they are more widely adopted. Testimony from several independent analysts indicated that emerging technologies still in the research and development stage can make possible even greater gains.

In addition, hybrid propulsion vehicles that combine a high-efficiency internal combustion engine with an electric motor and battery, could achieve major reductions in fossil fuel consumption and vehicle emissions while extending the driving range possible for electric vehicles. A hybrid system could provide emissions benefits in city driving, while reducing battery power requirements, thus reducing the need for a large or advanced battery.

One industry witness at the “Automotive Technologies for Fuel Economy” hearing stated that “many companies and researchers are proposing hybrid gasoline/electric powerplants as a viable alternative to either total gasoline-powered or total electric-powered vehicles in some markets.” One analyst pointed out that “a key component of a successful hybrid vehicle will be a small, efficient, and clean combustion engine. Making a small engine very efficient is particularly challenging and therefore deserving of public support.”

Even with a long-term transition to alternative fuels and alternative-fueled vehicles, the light-duty vehicle fleet is likely to continue to rely primarily on gasoline-powered piston engines in the near to mid-term. The Office of Technology Assessment, in its 1991 report on steps to reduce greenhouse gas emissions, concluded that major research and development efforts will be essential in order to **2096 *89 achieve further technical advances in fuel economy beyond the turn of the century.

The Department's Transportation Sector Energy Conservation research program focuses primarily on long-term basic research on advanced gas turbine engine technology, ceramic materials, and electric propulsion systems including advanced battery research and automotive fuel cells. The Department's program has not had a major focus on applied research to increase the fuel economy of automobiles using piston engines, including conventional spark ignition and diesel engines or 2-stroke-cycle engines.

The Department proposes in its fiscal year 1993 Budget Request to initiate a program to study, select, and develop an ultra-low emission, high-efficiency electric hybrid propulsion system for medium and light-duty vehicles. With proposed design studies to concentrate on engine technologies with the potential for early commercialization and rapid ramp-up to high volume production, this program could include a focus on piston engine technologies.

This section of the bill directs the Secretary of Energy to conduct a research, development, and demonstration program to accelerate the near-term and mid-term development of advanced technologies to improve the fuel economy of light-duty passenger vehicles powered by a piston engine, and hybrid vehicles powered by a combination of piston engine and electric

motor. The goal of the program is to achieve significant improvements in fuel economy while reducing emissions of greenhouse gases and air pollutants.

In soliciting proposals to conduct activities under this section, the Secretary is directed to make a special effort to involve small businesses in the program. One industry witness at the October 2, 1991 hearing stated that "there should be broad participation in U.S. Government sponsored R&D. The broader the participation the better." The Committee believes that the program should be structured to draw on the interest and engineering resources of the large number of American automobile parts designers and manufacturers, engineering firms, and individual inventors. The Department should have as an objective opening up automotive research and development markets for domestic innovators and entrepreneurs.

The otherwise required non–Federal cost share may be lowered if the Secretary finds that such reduction is warranted given the technical risks involved.

The Committee authorizes $100 million to carry out the Advanced Automotive Fuel Economy program for the five year period fiscal year 1993 through fiscal year 1997.

Sec. 2023. Alternative Fuel Vehicle Research, Development, and Demonstration Program

In the absence of new initiatives, United States oil consumption is expected to increase by more than 20 percent to over 20 million barrels per day in 2010. This finding, issued in 1991 by the Interagency Commission on Alternative Motor Fuels established by the Alternative Motor Fuels Act of 1988 (AMFA), highlights the importance of developing alternative fuels and related vehicle technology. The Alternative Fuels Council, also established by AMFA to **2097 *90 report to the Interagency Commission established a goal of using alternative fuels in 25 percent of vehicle travel in the U.S. by 2010 (about 2.5 million barrels per day).

The Commission identified a number of research areas that were needed to overcome barriers to adoption of this technology including engine and systems development, fuel storage systems, fuel injection, propulsion, fuel improvements, and emissions control.

The Alternative Fuel Vehicle Research, Development, and Demonstration Program directs the Secretary to conduct a program to improve natural gas and other alternative fuel vehicle technology through cost shared programs with public or private entities willing to provide 50 percent of the costs of the program. The Committee authorizes $50 million for the program for the five year period fiscal year 1993 through fiscal year 1997.

Sec. 2024. Biofuels Research and Development User Facility and Program

The production of alcohol fuels from biomass has the potential to supply over 20 percent of the Nation's fuel requirements in the long term. Recent technological advances have prompted major industry interest in the production of alcohol fuels from biomass.

Section 2024 directs the Secretary to establish a biofuels research and development user facility which will provide industry with onsite laboratory and office space to work on biofuels technology. This section also establishes a research and demonstration program for the production and use of diesel fuels from vegetable oils to determine the economics and feasibility of this option. To carry out this section the Committee authorizes $2.5 million for the period fiscal year 1993 through fiscal year 1997.

Sec. 2025. Electric Vehicle and Battery Research and Development

Energy security and reduction of airborne pollutants from the transportation sector have become imperatives for National energy policy. Dependency on petroleum, as well as the significant contribution to urban pollution from vehicle emissions, has prompted key initiatives to reduce U.S. petroleum consumption. Electric vehicles (EV's) are an environmentally attractive alternative to petroleum fueled vehicles, especially in urban areas. By some estimates, EV's could offer the potential for reducing major pollution emissions as much as 97 percent compared to conventional vehicles. However, given the use of batteries in electric vehicles that need to be recharged using electricity, care must be taken to assure that the reduction in pollutants such as hydrocarbons and related ozone forming emissions are not substituted for with unhealthy levels other pollutants such as SO2, NOx and carbon dioxide.

Building on local initiatives in Los Angeles and the South Coast Air Quality Management District, the California Air Resources Board adopted standards not only requiring a phase in of ultra clean cars by 1994, but also requiring that two percent of each manufacturers sales be zero emission vehicles in 1998. The share of sales for zero emissions vehicles rises to 10 percent by 2003. As noted above, Other states are reviewing and adopting the California ****2098 *91** standards. Such guaranteed markets have spurred the automobile industry to action.

In January of 1991, Chrysler, Ford, and General Motors formed the U.S. Advanced Battery Consortium. This research consortium was set up to develop advanced battery technologies for use in electric vehicles by the mid to late 1990's. The consortium proposed the advanced battery effort as a cost shared approach between the private and Federal sector to conduct collaborative research and development to achieve our energy and environmental objectives. In October of 1991, the President signed the agreement between the U.S. Advanced Battery Consortium and the Federal government.

With the advent of the state and local initiatives and the concerted effort by industry, there is a clear role for a federal partnership and a comprehensive program to achieve electric vehicle commercialization.

The Electric Vehicle and Battery Research and Development Program established in Section 2025 directs the Secretary of Energy to establish a cooperative program with the utility industry, the automobile industry, and such other persons or industries to conduct joint cooperative research and development in areas of (A) high efficiency electric power trains, (B) lightweight body structures, (C) advanced battery technology for electric vehicle application, (D) batteries and fuel cells for hybrid vehicle application, (E) fuel cells and fuel cell systems for primary vehicle power sources. and (F) photovoltaics for application with electric vehicle use. The Secretary is authorized to include in any such program, any projects that were entered into under the Federal Nonnuclear Energy Research and Development Act of 1974 or the Electric and Hybrid Vehicle Research, Development, and Demonstration Act of 1976.

The Program established in Section 2025 requires that the Secretary of Energy prepare a comprehensive multi-year program plan to guide program activities. The plan shall include a prioritization of research areas critical to commercialization of electric vehicles, program elements, management structure and activities, program strategies including technical milestones, estimated costs of individual program elements, a description of methods of technology transfer, and an identification of proposed participation by non–Federal entities.

The program established in Section 2025 provides for a comprehensive program of research development and demonstration of fuel cells and related systems for transportation applications. The section outlines priorities that will guide the research and demonstration activities as well identifies research application areas, including passenger vehicles, vans and utility vehicles, light rail systems and locomotives, trucks, passenger buses, non-chlorofluorocarbon mobile refrigeration systems, marine vessels, mobile engines and power generation. The Committee believes that fuel cells for transportation application offer significant national benefits. This program will expand DOE's ongoing efforts in fuel cells and increase development of promising approaches including proton exchange membrane technology.

The program established in Sec. 2025 directs the Secretary to conduct a program designed to accelerate wider application of advanced ****2099 *92** electric vehicle technology, including advanced battery technologies. The Secretary is also directed

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.,

Petitioners,

v.

ENVIRONMENTAL PROTECTION AGENCY, et al.,

Respondents.

DECLARATION OF JOSHUA M. 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 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,

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

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 zero-emission-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-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

[3] https://www.autosinnovate.org/posts/papers-reports/Get%20Connected%20Electric%20Vehicle%20Quarterly%20Report%202022%20Q3.pdf.

[4] *Id.*

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

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 hybrid)

[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 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

(continued…)

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 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

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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.*

[8] *Id.*

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]

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

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[9] *Id.*

[10] *Id.*

[11] *See, e.g.*, https://www.eenews.net/articles/ev-buyers-face-long-waits-price-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-by-the-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.").

[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/.

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]

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

[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/tsla-20221231.htm.

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:

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

[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.*

(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]

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

[18] *Id.*

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

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

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

[21] *Id.*

rebates and dealer 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

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

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]

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

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

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 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 EV.[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

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[25] https://news.mazdausa.com/2023-02-07-Mazda-Announces-Pricing-and-Packaging-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/en/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.

above, however, 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

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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.

move to 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" that it describes as a

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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/july/stellantis-intensifies-electrification-while-targeting-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/.

"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.

[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/#/.

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

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

[50] https://www.tceq.texas.gov/airquality/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.

Alabama's Department of Commerce secretary Greg Canfield celebrated Mercedes-Benz opening an electric 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.

Joshua Cunningham

Joshua M. Cunningham

[58] https://www.kentucky.gov/Pages/Activity-stream.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.

Exhibit A

Joshua **Cunningham**

Davis, CA I 530-902-9610 I evdrive@sbcglobal.net I www.linkedin.com/in/joshua-cunningham-zev/

SUMMARY

Technology, policy analyst and manager with over 25 years of engineering and environmental policy experience in automotive electric vehicles. Broad experience that includes work in both the private and public sectors. Strong background in systems analysis, including lifecycle emissions and electric vehicle total cost of ownership.

SKILLS

- Public policy development
- Stakeholder engagement
- Managing teams
- Communication
- Strategic planning
- Analysis of emissions

EXPERIENCE

California Air Resources Board (CARB), Sacramento, CA (3/2009 – present)

Chief, Advanced Clean Cars Branch (4/2015 – present)

- Managing a broad program that includes the clean vehicle emission standards and the electric vehicle mandate requiring 100% sales by 2035 in California; Managed first-of-its-kind Clean Miles Standard with electrification requirements on ride hailing industry
- Planning and technical support for electric vehicle charging and hydrogen infrastructure, as well as partnerships to address electric vehicle market barriers

Manager, Transportation Systems Planning Section (4/2013 – 3/2015)

- Managing a team focused on analyzing multi-sector strategies to achieve long-term (2030-2050) air quality and greenhouse gas emission reductions
- Developing analytical tools (Vision emission scenario model) to evaluate specific strategies, including vehicle technologies, alternative fuels, and travel behavior

Director of Programs, Plug-in Electric Vehicle Collaborative (1/2011 – 3/2013)

- Launched public-private-partnership and developed annual work-plan, managing topic working groups for this multi-stakeholder program focused on fostering the EV market
- Lead coordinator and technical writer for a multi-stakeholder Strategic Plan for California on plug-in electric vehicles: The PEV Collaborative's "Taking Charge"

Air Resources Engineer, ZEV Regulation Implementation Section (3/2009 – 12/2010)

- Conducted economic and emissions impact analyses of the automotive industry from the Zero Emission Vehicle (ZEV) Regulation (regulation change, January 2012)
- Strong contributor to the Governor's 2012 Zero Emission Vehicle Executive Order, and subsequent ZEV Action Plan, working on the Governor's Office inter-agency team

Institute of Transportation Studies (UC Davis), Davis, CA (4/2005 – 02/2009)

Program Manager, Sustainable Transportation Energy Pathways (STEPS)

- Coordinated research priorities, developed sponsor relationships, formed research collaborations, led major proposals, and organized program events
- Successfully led the effort to secure a $1M seed grant from the California Clean Energy Fund (CalCEF) to launch the UC Davis Energy Efficiency Center (EEC)

United Technologies Corp (UTC), Fuel Cells Div., South Windsor, CT (9/2002 - 3/2005)

Senior Systems Engineer, Transportation Group

- Analyzed and designed fuel and air systems, and power controls, for the Hyundai Tucson fuel cell vehicle & California Bay Area AC Transit fuel cell bus
- Project team leader, BMW fuel cell system designed for freezing conditions
- Special assignments on Advanced Systems and Intellectual Property Teams

Delphi Chassis Systems (General Motors), Dayton, OH (9/1996 - 8/1998)

Product Engineer, Advanced Suspension Development

- Lead engineer for air compressor in automatic leveling system for production vehicles
- Extensive project management experience leading cross-functional product teams
- Developed component technical specifications and design validation test plans

EDUCATION

Masters of Science (MS) - Transportation Technology and Policy (TTP)
University of California, Davis (Davis, California); Graduated 2001

Bachelor of Science (BS) – Mechanical Engineering
Michigan State University (East Lansing, Michigan); Graduated 1996

National Science Foundation Overseas Study Program
Rheinisch-Westfaelische Technische Hochschule (Aachen, Germany); Completed 1995

AWARDS

- CARB Sustained Superior Accomplishment Award, Long-term emission planning (2016)
- CARB Gold Superior Accomplishment Award, Advanced Clean Cars rulemaking (2011)
- SAE Outstanding Technical Paper of 2010; selected for publication in an SAE international journal for passenger vehicles. Paper 2010-01-2306 (2010)
- Patent award (#8, 124, 290) for fuel cell operation with cryogenic hydrogen storage (developed 2004, final patent awarded in 2012)
- ENO Transportation Fellow, Center for Transportation Leadership Development (2000)
- U.S. Department of Energy GATE Fellowship for graduate studies (1999-2000)

PUBLICATIONS

- CARB, “2020 Mobile Source Strategy”, author and advisor for On-Road Light-Duty Vehicles chapter, October 2021
- PEV Collaborative, “Taking Charge: Establishing California Leadership in the Plug-in Electric Vehicle Marketplace”, UC Davis, December 2010
- Cunningham, J.M., “Achieving an 80% GHG Reduction by 2050 in California’s Passenger Vehicle Fleet: Implications for the ZEV Regulation”, SAE paper # 2010-01-2306, October 2010
- Cunningham, J.M., et al, “Why Hydrogen and Fuel Cells are Needed to Support California Climate Policy”, ITS-Davis, UCD-ITS-RR-08-06, Davis CA (2008)
- Cunningham, J.M., et al, “A Comparison of High Pressure and Low Pressure Operation of PEM Fuel Cell Systems”, SAE paper #2001-01-0538 (2001)

VOLUNTEER SERVICE & ACTIVITIES

- Board member, Valley Climate Action Center: A non-profit, all-volunteer organization advocating climate mitigation strategies for the City of Davis (2012 to present)
- Habitat for Humanity, Dayton Ohio chapter (1996-1998)
- Operation Crossroads Africa: Volunteer service in Ghana assisting local non-profit organizations with community development (1996)
- Musician (percussion) in competitive Drum and Bugle Corps, as well as Michigan State University marching band drumline (1991-1994)

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.,

Petitioners,

v.

ENVIRONMENTAL PROTECTION AGENCY, et al.,

Respondents.

DECLARATION OF KENNETH GILLINGHAM

I, Kenneth Gillingham, declare as follows:

1. I am a Professor of Economics at Yale University, where I study the economics of vehicle markets and transportation, among other subjects. I began my employment at Yale in 2011 as an Assistant Professor, and have since been promoted to Associate Professor (in 2017) and now full Professor (in 2021). I also hold a position as a Research Associate with the National Bureau of Economic Research and serve on the Board of Environmental Change and Society of the National Academies of Sciences, Engineering, and Medicine, among other professional affiliations and positions. In 2015-2016, I served as the Senior Economist for Energy and the Environment at the White House Council of Economic Advisers.

2. I hold a Ph.D. in Management Science & Engineering and Economics, as well as M.S. degrees in Statistics and Management Science & Engineering, from Stanford University, and an undergraduate degree (A.B.) in Economics and Environmental Studies from Dartmouth College. I teach, research, and publish in the fields of applied microeconomics, industrial organization, and energy modeling, examining the adoption of new technologies, quantitative policy and program analysis, and climate change policy, among other fields.

3. I publish frequently in peer-reviewed academic journals on the topics discussed in this declaration—specifically the automotive industry and how it responds to changing legal requirements. For example, I have co-authored an article titled "Equilibrium Trade in Automobile Markets" which was recently published in the *Journal of Political Economy*. And I co-authored an article titled "Running a Car Costs Much More Than People Think–Stalling the Uptake of Green Travel" that was published in *Nature* in 2020. My full CV is attached to this declaration as Exhibit A.

4. I have reviewed the Declaration of Benjamin Zycher, Ph.D. (Zycher Declaration), filed concurrently with Petitioners' Proof Brief in the D.C. Circuit case *State of Ohio, et al. v. Environmental Protection Agency, et al.* (No. 22-1081 & consolidated cases). That declaration asserts that the California Zero Emissions Vehicle (ZEV) standards will increase the purchase price of conventional vehicles in all states. As I explain below, this assertion is based on a simplistic and incorrect understanding of vehicle markets. And it is contradicted by economic theory and available empirical evidence. In short, there is no reason to believe that purchase prices for conventional vehicles in Ohio (or other States that do not adopt California's standards) will increase due to the ZEV standards in California.

5. The Zycher Declaration assumes that vehicle manufacturers can only sell enough zero-emission vehicles to meet the ZEV standards by lowering prices of zero emission vehicles and raising prices of conventional vehicles. Further, it assumes the price of conventional vehicles must be the same everywhere in the United States. Thus, the declaration asserts that the ZEV standards raise prices for conventional vehicles in California and, because prices must be the same everywhere, also raise prices for conventional vehicles in Ohio, causing damages to Ohio.

6. In the following, I will describe several reasons why this argument is flawed and is based on a simplistic and incorrect understanding of vehicle markets. To briefly summarize: (1) the economic literature is replete with examples of price dispersion across geography—it is a standard phenomenon that would be expected, (2) empirical evidence demonstrates that final (pre-tax) transaction prices for vehicles do differ across geography, and (3) automakers have multiple ways to comply with ZEV standards, and economic evidence suggests that increasing nationwide prices of conventional vehicles is less likely to be the method that automakers will use to comply.

There is Extensive Economic Theory and Evidence on "Price Dispersion" Across Geographic Regions

7. The Zycher Declaration makes the following statement: "In short, a longstanding prediction of standard economic analysis is that there cannot

prevail more than one price for a homogenous good; a given vehicle in one state must sell for the same price as an identical vehicle in another state."

8. This statement represents an extraordinarily simplistic understanding of price formation in markets. Indeed, there is a vast literature on the topic of "price dispersion," which describes how consumers may face very different prices for the same good. There is theory and evidence on price dispersion even for homogeneous goods (i.e., goods with the same quality and characteristics) when the consumers are different, the information available is different, the choices available on the market are different, or the marginal cost of production is different. Indeed, as a standard industrial organization handbook chapter states: "[P]rice dispersion is ubiquitous and persistent. Regardless of the particular product (tinplate cans or PDAs), the venue in which they are sold (online or offline, in the US or abroad), or the time period (1901 or 2005), the inescapable conclusion from the empirical literature is a validation of Stigler's and Varian's initial observations: Information remains a valuable resource, and the law of one price is still no law at all." Michael Baye, John Morgan, and Patrick Scholten, Handbook of Economics and Information Systems, T. Hendershott, ed., at page 46 under concluding remarks (Elsevier 2006). This handbook chapter also stated, on page 47: "Despite widespread adoption of inventions such as the automobile, the telephone, television, and the Internet,

price dispersion is still the rule rather than the exception in homogenous product markets." This is considered standard knowledge in the economics profession. (*See also, e.g.*, Stigler 1961, Varian 1980, Borenstein and Rose 1994, Allen et al. 2019, Crucini and Yilmazkuday 2014[1].)

9. Economic theory is clear that prices could differ across location if the demand for the product differs across location and there are frictions in the market, such as transportation costs or search costs. These conditions certainly hold in the automobile market. In technical terms, places with more inelastic demand for a specific product (i.e., places where people are less price sensitive) would face higher prices. Search costs and the costs of transporting the vehicle to the consumer's final destination mean that most people do not find it worth their while to shop for the product from far away. The automobile market is certainly characterized by search costs and transportation costs; the vast majority of customers shop at dealers within their state or a reasonable

[1] Stigler, G. 1961. The Economics of Information. Journal of Political Economy, 69 (3), 213-225; Varian, H.R. 1980. A Model of Sales. American Economic Review, 70, 651-659; Borenstein, S. and N.L. Rose. 1994. Competition and Price Dispersion in the U.S. Airline Industry. Journal of Political Economy, 102 (4), 653-683; Allen, J., R. Clark, J-F Houde. 2019. Search Frictions and Market Power in Negotiated-Price Markets. Journal of Political Economy, 127(4), 1550–1598; Crucini, M. and H. Yilmazkuday. 2014. Understanding Long-run Price Dispersion. Journal of Monetary Economics, 66, 226-240.

driving distance away (*e.g.*, New York Times 2002[2]). For example, according to data from Edmunds, car shoppers for 2019 model year vehicles were willing to drive 47 miles on average in January 2020. Even in the midst of the deepest supply chain disruptions in 2021, car shoppers were still only willing to drive 65 miles on average (for outgoing 2020 model year vehicles in January 2021) (PR Newswire 2021[3]). While some customers are willing to travel further, profit-maximizing automakers and dealers price for the vast majority of customers, rather than the small number who are willing to drive very long distances to purchase a new car.

10. It is also true that vehicle transaction prices are ultimately set in a negotiation process between customers and dealers (with the exception of some electric-vehicle companies that sell directly to customers). Thus, the final transaction prices can vary across location even beyond differences that the automakers would like to see. If there is great demand for a vehicle in a given location, dealers have more negotiating power and thus prices will be higher.

11. The Zycher Declaration misapplies the concept of the "Law of One Price." The Law of One Price for homogenous goods does *not* say that the

[2] https://www.nytimes.com/2002/12/06/travel/driving-when-the-perfect-car-is-on-a-lot-far-far-away.html

[3] https://www.prnewswire.com/news-releases/i-would-drive-500-miles-consumers-are-willing-to-travel-longer-distances-to-get-the-cars-they-want-during-covid-19-according-to-edmunds-301226947.html

price is necessarily identical across locations. When it is applied, it simply says that prices in different locations *tend* to move together. Most importantly, even if prices tend to move together, there may still be persistent differences in prices across locations (i.e., price dispersion), as well as changes in price in one location that differ from other locations.

12. In the automobile market, the search costs, negotiation costs, and possibly even transportation costs can allow for lasting differences in prices across locations. That supply and demand dynamics can produce different prices in different locations demonstrates that prices need not be the same everywhere even for fungible goods. And regional variation in prices can be caused by other factors, as well, including manufacturer choices as to their short-term and long-term strategies.

13. One might wonder what the role of the manufacturer suggested retail price (MSRP) for each vehicle is. It is true that each automaker sets a single nationwide MSRP for each vehicle model/model year/trim. However, a first key point is that the MSRP is not the price the automakers charge the dealers. The MSRP is a suggested price for the dealers to charge their customers and is above the price the automaker charges the dealer in order to allow the dealer to earn a profit. Automakers provide vehicles to dealers at a price that is not advertised (it may differ from the "invoice price" due to

unadvertised dealer sales incentives as is discussed by Consumer Reports[4]), and this price the dealers pay—which will affect what the dealers will accept from their customers—can differ by location. Further, the automakers can also offer direct-to-consumer rebates that differ by location to lower the final transaction price.

14. Accordingly, it is perfectly reasonable to expect differences in price across states due to a variety of factors. In addition to the market factors described above, other factors that apply differently across states, including regulations such as the California ZEV standards, could lead to persistent differences in prices across states. Thus, economic theory tells us that it is entirely possible for ZEV standards to affect automobile prices in California and not affect conventional vehicle prices in Ohio.

Empirical Evidence Demonstrates that Vehicle Transaction Prices Differ Across Geography

15. The discussion above focused on why economic theory indicates that vehicle transaction prices differ across geography. It turns out that this is exactly what we see in practice. The differences in prices demonstrate that vehicle transaction prices vary in a way such that, even if automakers increased conventional vehicle prices in response to California's

[4] https://www.consumerreports.org/car-pricing-negotiation/guide-to-car-pricing-terms

ZEV standards, automakers could choose to change prices only in California (and other States that adopt those standards) without altering prices in Ohio.

16. A quick review of final vehicle transaction prices on TrueCar.com or any similar website reveals notable disparities in prices around the country. The Zycher Declaration provides no empirical data showing that conventional vehicle pricing is the same nationwide. My own review, along with the Declaration of Joshua Cunningham (which I have reviewed), indicates that transaction prices for conventional vehicles do, in fact, differ across locations. For example, the 2022 Ford Explorer is selling, on average, for $34,557 in Texas and $35,600 in Ohio. In California it is selling for $36,329. The 2022 Chevrolet Malibu sells on average for $25,931 in Atlanta, Georgia; $26,157 in Columbus, Ohio; $26,546 statewide in Texas; and $26,674 statewide in California. The 2022 Dodge Ram 1500 sells on average for $36,980 in California, $37,149 in Ohio, and $37,467 in Texas.

17. In short, the empirical evidence shows that the Zycher Declaration's assertion that vehicle prices must be the same everywhere nationwide is demonstrably false.

Automakers Have Multiple Ways to Comply With ZEV Standards

18. The Zycher Declaration assumes that automakers only comply with ZEV standards by lowering the price of ZEVs and raising the price of

conventional vehicles in California. No data were provided to support this assumption. Indeed, there are multiple ways to comply with the ZEV standards. It is true that automakers could lower the price of ZEVs and raise the price of conventional vehicles in California. They could also simply lower the price of ZEVs and not change the price of conventional vehicles, possibly taking a short-run reduction in profit in order to be a first-mover in developing compelling ZEVs. Further, they could avoid changing their prices in response to the ZEV mandate but rather invest in developing ZEVs that are going to sell in the market at sufficient levels to meet the ZEV standard.

19. Evidence from the economic literature shows that the least-expensive approach to complying with standards on vehicle attributes tends to be to invest in innovation to develop vehicles that comply with the standards (e.g., see Klier and Linn 2012[5]). Such investment is a fixed cost that would be financed by overall revenues from the automaker and might mean a decrease in short-run overall accounting profits in order to achieve higher overall long-run expected profits. In contrast, adjusting prices—for example, by increasing the prices of conventional vehicles—will lead to a short-run loss in profits because automakers will sell fewer vehicles, with no potential for a long-run gain. The

[5] Klier, T. and J. Linn. 2012. New-Vehicle Characteristics and the Cost of the Corporate Average Fuel Economy Standard. RAND Journal of Economics, 43(1), 186-213.

bottom line is that the economic evidence indicates that automakers prefer to meet standards by building cars that meet the standards, rather than changing prices. While this evidence is from examining federal vehicle standards, the logic would be expected to apply as well to state ZEV standards.

20. The key point here is that there are more attractive ways for automakers to comply with ZEV standards than to raise prices for conventional vehicles. This is true even in states that adopt California's ZEV standards and is especially true in states that have not adopted the ZEV standards.

Summary

21. To conclude, the arguments in the Zycher Declaration rely on an erroneous understanding of the vehicle market that is not supported by economic theory or empirical evidence. Vehicle buyers in Ohio or the other petitioner states are very unlikely to face higher conventional vehicle prices due to the ZEV standards in California.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and that this declaration was executed on February 10, 2023, in New Haven, Connecticut.

Kenneth Gillingham, Ph.D.

Exhibit A

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Current Appointments

Yale University, *Professor of Economics*, July 2021-present

School of the Environment
Secondary appointment, School of Management
Secondary appointment, Department of Economics
Secondary appointment, Jackson School of Global Affairs

National Bureau of Economic Research, *Research Associate*, Oct 2021-present

National Academies of Sciences, Engineering, and Medicine, Board of Environmental Change and Society, *Member*, Jun 2022-present

Review of Economics & Statistics, *Associate Editor*, February 2021-present

RWI Research Network, *Research Fellow*, October 2016-present

CESIfo Research Network, *Affiliate*, April 2017-present

Research Interests

Environmental & Energy Economics, Industrial Organization, Public Economics, Empirical Methods, Technological Change, Transportation Economics, Energy & Climate Policy Modeling.

Education

Stanford University, Ph.D., Management Science & Engineering, minor in Economics, 2011

Fields: Public & Environmental Economics, Industrial Organization, Econometrics

Stanford University, M.S., Statistics, 2010

Stanford University, M.S., Management Science & Engineering (Economics & Finance), 2006

Dartmouth College, A.B., Economics and Environmental Studies, minor in Earth Sciences, 2002

Previous Appointments

Yale University, Associate Professor (without tenure), 2017-2021

National Bureau of Economic Research, Faculty Research Fellow, 2015-2021

UC Berkeley Energy Institute at Haas, Visiting Scholar, Feb 2018

Stanford University Economics Department, Visiting Scholar, Jan 2018

Yale University, Assistant Professor, 2011-2017

White House Council of Economic Advisers, Senior Economist, 2015-2016
University of Chicago Energy Policy Institute (Harris/Booth), Visiting Scholar, 2014
Indiana University Kelley School of Business, Visiting Scholar, 2013
California Air Resources Board, Economist (Graduate Student Assistant), 2011
Stanford University Economics Department, Research Assistant, 2008-2011
Stanford University Energy Modeling Forum, Research Assistant, 2008
Stanford University Precourt Energy Efficiency Center, Research Assistant, 2004-2006
Fulbright New Zealand, Fulbright Fellow, University of Auckland, 2007
White House Council of Economic Advisers, Fellow for Energy & Environment, 2005
Resources for the Future, Research Assistant, 2002-2004
Joint Global Change Research Institute (PNNL), Research Assistant, 2001
Dartmouth College, Research Assistant, 1998-2002

Research

Google Scholar as of 1/4/2023: 10,026 citations, h-index 42, i10-index 73.
* denotes current or former advisee

Working Papers

Burkhardt, J.*, **K. Gillingham**, P. Kopalle, Experimental Evidence on the Effect of Information and Pricing on Residential Electricity Consumption, 3rd round resubmission to *Management Science*.

Fibich, G., T. Levin, **K. Gillingham**, Boundary Effects in the Diffusion of New Products on Cartesian Networks, Resubmitted to *Operations Research*.

Bollinger, B., **K. Gillingham**, K. Gullo, Making Pro-Social Social: The Effectiveness of Social Norm Appeals for Energy Conservation Using Social Media, Resubmitted to the *Journal of the Association for Consumer Research*.

Gillingham, K., M. Ovaere* and S. Weber*, Carbon Policy and the Emissions Implications of Electric Vehicles, Revisions requested at the *Journal of the Association of Environmental & Resource Economists*.

Bollinger, B., **K. Gillingham**, S. Lamp*, T. Tsvetanov*, Promotional Campaign Duration and Word-of-Mouth in Durable Good Adoption, Revisions requested at *Marketing Science* (Practice Prize).

Forsythe, C., **K. Gillingham**, J. Michalek, K. Whitefoot, What is Driving Electric Vehicle Adoption? Consumer Preferences or Vehicle Technology, Revisions requested at *Proceedings of the National Academy of Sciences*.

Gillingham, K. and P. Huang*, Racial Disparities in the Health Effects from Air Pollution: Evidence from Ports, In Review.

Carattini, S.*, **K. Gillingham**, X. Meng, E. Yoeli, Peer-to-Peer Solar and Social Rewards: Evidence From a Field Experiment, In Review.

Gillingham, K., F. Iskhakov, A. Munk-Nielsen, J. Rust, B. Schjerning, A Dynamic Model of Vehicle Ownership, Type Choice, and Usage.

Bento, A., **K. Gillingham**, K. Roth, The Effect of Fuel Economy Standards on Vehicle Weight Dispersion and Accident Fatalities.

Berry, S., **K. Gillingham**, J. Levinsohn, Selection and Unraveling in Automobile Insurance: The Effect of Per-Mile Insurance.

Bollinger, B. and **K. Gillingham**, Learning-by-Doing in Solar Photovoltaic Installations.

Bollinger, B., **K. Gillingham**, and S. Lamp, Equilibrium Effects of Competition on Solar Photovoltaic Demand and Pricing.

Journal Articles

2023

Gillingham, K., A. van Benthem, S. Weber, M.A. Saafi, X. He (2023) Has Consumer Acceptance of Electric Vehicles Been Increasing? Evidence from Microdata on Every New Vehicle Sale in the United States. *American Economic Association: Papers & Proceedings*, forthcoming.

Langford, R.* and **K. Gillingham** (2023) Quantifying the Benefits of the Introduction of the Hybrid Electric Vehicle. *International Journal of Industrial Organization*, forthcoming.

2022

Gillingham, K., F. Iskhakov, A. Munk-Nielsen, J. Rust, B. Schjerning (2022) Equilibrium Trade in Automobile Markets. *Journal of Political Economy*, 130(10): 2534âĂŞ2593.

Bollinger, B, **K. Gillingham**, A.J. Kirkpatrick, S. Sexton (2022) Visibility and Peer Influence in Durable Good Adoption. *Marketing Science*, 41(3): 453-476.

Burkhardt, J.*, N. Chan*, B. Bollinger, **K. Gillingham** (2022) Conformity and Conservation: Evidence from Home Landscaping and Water Conservation. *American Journal of Agricultural Economics*, 104(1): 228-248.

2021

Gillingham, K., S. Houde, A. van Benthem (2021) Consumer Myopia in Vehicle Purchases: Evidence from a Natural Experiment. *American Economic Journal: Economic Policy*, 13(3): 1-33.

Gillingham, K. and B. Bollinger (2021) Social Learning and Solar Photovoltaic Adoption: Evidence from a Field Experiment. *Management Science*, 67(11): 6629-7289.

Gillingham, K., P. Huang*, C. Buehler, D. Gentner, J. Peccia (2021) The Climate and Health Benefits from Intensive Building Energy Efficiency Improvements. *Science Advances*, 7(34): eabg0947.

Wagner, G., D. Anthoff, M. Cropper, S. Dietz, **K. Gillingham**, B. Groom, J.P. Kelleher, F. Moore, J. Stock (2021) Eight Priorities for Calculating the Social Cost of Carbon. *Nature*, 590: 548-550.

Wolfram, P.*, S. Weber*, **K. Gillingham**, E. Hertwich (2021) Pricing of Indirect Emissions Accelerates Low-Carbon Transition of U.S. Light Vehicle Sector. *Nature Communications*, 12: 7121.

Grubb, M., D. Popp, S. Smulders, **K. Gillingham**, S. Samadi, M. Glachant, C. Penasco, G. Pavan, G. Hassel, E. Mizuno, E. Rubin, A. Dechezleprêtre (2021) Induced Innovation in Energy Technologies and Systems: A Review of Evidence and Potential Implications for CO_2 Mitigation. *Environmental Research Letters*, 16: 043007.

Berrill, P.*, **K. Gillingham**, E. Hertwich (2021) Linking Housing Policy, Housing Typology and Residential Energy Demand in the United States. *Environmental Science & Technology*, 55(4): 2224-2233.

Berrill, P.*, **K. Gillingham**, E. Hertwich (2021) Drivers of Change in U.S. Residential Energy Consumption and Greenhouse Gas Emission, 1990-2015. *Environmental Research Letters*, 16(3): 034045.

2020

Bollinger, B., J. Burkhardt*, **K. Gillingham** (2020) Peer Effects in Residential Water Conservation: Evidence from Migration. *American Economic Journal: Economic Policy*, 12(3): 107-133.

Archsmith, J., **K. Gillingham**, C. Knittel, D. Rapson (2020) Attribute Substitution in Household Vehicle Portfolios. *RAND Journal of Economics*, 51(4): 1162-1196.

Gillingham, K. (2020) The Rebound Effect and the Rollback of Fuel Economy Standards. *Review of Environmental Economics & Policy*, 14(1): 136-142.

Bollinger, B., **K. Gillingham**, M. Ovaere* (2020) Field Experimental Evidence Shows that Self-Interest Attracts More Sunlight. *Proceedings of the National Academy of Sciences*, 117(34): 20503-20510.

Gillingham, K. and P. Huang* (2020) Long-run Environmental and Economic Impacts of Electrifying Ports in the United States. *Environmental Science & Technology*, 54(16): 9824-9833.

Andor, M., A. Gerster, **K. Gillingham**, M. Horvath (2020) Running a Car Costs Much More Than People Think–Stalling the Uptake of Green Travel. *Nature*, 580: 453-455.

Wolske, K., **K. Gillingham**, P.W. Schultz (2020) Peer Influence on Household Energy Behaviors. *Nature Energy*, 5: 202-212.

Gillingham, K., C. Knittel, J. Li, M. Ovaere*, M. Reguant (2020) The Short-run and Long-run Effects of Covid-19 on Energy and the Environment. *Joule*, 4(7): 1337-1341.

2019

Gillingham, K. and T. Tsvetanov* (2019) Hurdles and Steps: Estimating Demand for Solar Photovoltaics. *Quantitative Economics*, 10(1): 275-310.

Gillingham, K. and A. Munk-Nielsen* (2019) A Tale of Two Tails: Commuting and the Fuel Price Response in Driving. *Journal of Urban Economics*, 109: 27-40.

Gillingham, K. and P. Huang* (2019) Is Abundant Natural Gas a Bridge to a Low-carbon Future or a Dead-end? *Energy Journal*, 40(2): 75-100.

2018

Gillingham, K., W. Nordhaus, D. Anthoff, G. Blanford, V. Bosetti, P. Christensen*, H. McJeon, J. Reilly (2018) Modeling Uncertainty in Integrated Assessment of Climate Change: A Multi-Model Comparison. *Journal of the Association of Environmental & Resource Economists*, 5(4): 791-826.

Gillingham, K. and T. Tsvetanov* (2018) Nudging Energy Efficiency Audits: Evidence from a Field Experiment. *Journal of Environmental Economics & Management*, 90: 303-316.

Gillingham, K. and J. Stock (2018) The Cost of Reducing Greenhouse Gas Emissions. *Journal of Economic Perspectives*, 32(5): 1-20.

Bento, A., **K. Gillingham**, M. Jacobsen, C. Knittel, B. Leard, J. Linn, V. McConnell, D. Rapson, J. Sallee, A. van Benthem, K. Whitefoot (2018) Flawed Analyses of U.S. Auto Fuel Economy Standards. *Science*, 352(6419): 1119-1121.

Kraft-Todd, G.*, B. Bollinger, **K. Gillingham**, S. Lamp*, D. Rand (2018) Credibility-Enhancing Displays Promote the Provision of a Non-Normative Public Good. *Nature*, 563: 245-248.

Christensen, P.* , **K. Gillingham**, and W. Nordhaus (2018) Uncertainty in Forecasts of Long-Run Economic Growth. *Proceedings of the National Academy of Sciences*, 115(21): 5409-5414.

Gillingham, K., A. Keyes, K. Palmer (2018) Advances in Evaluating Energy Efficiency Policies and Programs. *Annual Review of Resource Economics*, 10(1): 511-532.

2017

Gillingham, K., S. Carattini*, D. Esty (2017) Lessons from First Campus Carbon Pricing Scheme. *Nature*, 551: 27-29.

Nemet, G., E. O'Shaughnessy, R. Wiser, N. Darghouth, G. Barbose, **K. Gillingham**, and V. Rai (2017) What Factors Affect the Prices of Low-Priced U.S. Solar PV Systems? *Renewable Energy*, 114: 1333-1339.

Nemet, G., E. O'Shaughnessy, R. Wiser, N. Darghouth, G. Barbose, **K. Gillingham**, and V. Rai (2017) Characteristics of Low-Priced Solar Systems in the U.S. *Applied Energy*, 187: 501-513.

2016

Gillingham, K., H. Deng*, R. Wiser, N. Darghough, G. Nemet, G. Barbose, V. Rai, and C. Dong (2016) Deconstructing Solar Photovoltaic Pricing: The Role of Market Structure, Technology, and Policy. *Energy Journal*, 37(3): 231-250.

Gillingham, K., D. Rapson, and G. Wagner (2016) The Rebound Effect and Energy Efficiency Policy. *Review of Environmental Economics & Policy*, 10(1): 68-88.

Gillingham, K., J. Bushnell, M. Fowlie, M. Greenstone, C. Kolstad, A. Krupnick, A. Morris, R. Schmalensee, and J. Stock (2016) Reforming the Federal Coal Leasing Program. *Science*, 354(6316): 1096-1098.

Burke, M., M. Craxton, C. Kolstad, C. Onda, H. Allcott, E. Baker, L. Barrage, R. Carson, **K. Gillingham**, J. Graff-Zivin, M. Greenstone, S. Hallegatte, W. Hanemann, G. Heal, S. Hsiang, B. Jones, D. Kelly, R. Kopp, M. Kotchen, R. Mendelsohn, K. Meng, G. Metcalf, J. Moreno-Cruz, R. Pindyck, S. Rose, I. Rudik, J. Stock, and R. Tol (2016) Opportunities for Advances in Climate Economics. *Science*, 352(6283): 292-293.

2015

Chan, N.* and **K. Gillingham** (2015) The Microeconomic Theory of the Rebound Effect and its Welfare Implications. *Journal of the Association of Environmental & Resource Economists*, 2(1): 133-159.

Gillingham, K., A. Jenn*, and I. Azevedo (2015) Heterogeneity in the Response to Gasoline Prices: Evidence from Pennsylvania and Implications for the Rebound Effect. *Energy Economics*, 52(S1): S41-S52.

Graziano, M.* and **K. Gillingham** (2015) Spatial Patterns of Solar Photovoltaic System Adoption: The Influence of Neighbors and the Built Environment. *Journal of Economic Geography*, 15(4): 815-839.

2014

Pizer, W., M. Adler, J. Aldy, D. Anthoff, M. Cropper, **K. Gillingham**, M. Greenstone, B. Murray, R. Newell, R. Richels, A. Rowell, S. Waldhoff, and J. Wiener (2014) Using and Improving the Social Cost of Carbon. *Science*, 346(6214): 1189-1190.

Gillingham, K. and K. Palmer (2014) Bridging the Energy Efficiency Gap: Policy Insights from Economic Theory and Empirical Analysis. *Review of Environmental Economics & Policy*, 8(1): 18-38. Editor's Choice.

Gillingham, K. (2014) Identifying the Elasticity of Driving: Evidence from a Gasoline Price Shock in California. *Regional Science & Urban Economics*, 47(4): 13-24. Special Issue Tribute to John Quigley.

2013

Gillingham, K., M. Kotchen, D. Rapson, and G. Wagner (2013) The Rebound Effect is Over-played. *Nature*, 493: 475-476.

Yeh, S., G. Mishra, G. Morrison, J. Teter, R. Quiceno, **K. Gillingham**, and X. Riera-Palou (2013) Long-Term Shifts in Lifecycle Energy Efficiency and Carbon Intensity. *Environmental Science & Technology*, 47(6): 2494-2501.

2012

Bollinger, B. and **K. Gillingham** (2012) Peer Effects in the Diffusion of Solar Photovoltaic Panels. *Marketing Science*, 31(6): 900-912.

Gillingham, K., M. Harding, and D. Rapson (2012) Split Incentives in Residential Energy Consumption. *Energy Journal*, 33(2): 37-62.

Gillingham, K. and J. Sweeney (2012) Barriers to Implementing Low Carbon Technologies. *Climate Change Economics*, 3(4), 1-25.

Prior to 2011

Leaver, J. and **K. Gillingham** (2010) Economic Impact of the Integration of Alternative Vehicle Technologies into the New Zealand Vehicle Fleet. *Journal of Cleaner Production*, 18: 908-916.

Gillingham, K., R. Newell, and K. Palmer (2009) Energy Efficiency Economics and Policy. *Annual Review of Resource Economics*, 1: 597-619. Reprinted in Italian in Energia (2010).

Gillingham, K. (2009) Economic Efficiency of Solar Hot Water Policy in New Zealand. *Energy Policy*, 37(9): 3336-3347.

Leaver, J., L. Leaver, and **K. Gillingham** (2009) Assessment of Primary Impacts of a Hydrogen Economy in New Zealand using UNISYD. *International Journal of Hydrogen Energy*, 34(7): 2855-2865.

van Benthem, A., **K. Gillingham**, and J. Sweeney (2008) Learning-by-Doing and the Optimal Solar Policy in California. *Energy Journal*, 29(3): 131-151.

Gillingham, K., R. Newell, and W. Pizer (2008) Modeling Endogenous Technological Change for Climate Policy Analysis. *Energy Economics*, 30(6): 2734-2753.

Gillingham, K., S. Smith, and R. Sands (2008) Impact of Bioenergy Crops in a Carbon Constrained World: An Application of the MiniCAM Linked Energy-Agriculture and Land Use Model. *Mitigation and Adaptation Strategies for Global Change*, 13(7): 675-701.

Safirova, E., **K. Gillingham**, and S. Houde (2007) Measuring Marginal Congestion Costs of Urban Transportation: Do Networks Matter? *Transportation Research A*, 41(8): 734-749.

Gillingham, K., R. Newell, and K. Palmer (2006) Energy Efficiency Policies: A Retrospective Examination. *Annual Review of Environment and Resources*, 31: 193-237.

Shih, J-S, W. Harrington, W. Pizer, and **K. Gillingham** (2006) Economies of Scale in Community Water Systems. *Journal of American Water Works Association*, 98(9): 100-108.

Safirova, E., P. Nelson, W. Harrington, **K. Gillingham**, and A. Lipman (2005) Choosing Congestion Pricing Policy: Cordon Tolls vs. Link-Based Tolls. *Transportation Research Record*, 1932: 169-177.

Book Chapters

Gillingham, K. (2021) Designing Fuel-Economy Standards in Light of Electric Vehicles. In: Environmental and Energy Policy and the Economy vol. 3, Tatyana Deryugina, Matthew Kotchen, James Stock (eds). National Bureau of Economic Research.

Gillingham, K. and S. Weber (2021) Fuel Economy Standards: Impacts and Safety. In: International Encyclopedia of Transportation, Roger Vickerman, Robert Noland, Dick Ettema (eds). Elsevier.

Gillingham, K. (2019) Fostering Energy Innovation for a Sustainable Twenty-First Century. In: A Better Planet: 40 Big Ideas for a Sustainable Future, Daniel Esty (ed). Yale University Press.

Gillingham, K. (2014) Rebound Effects. In: The New Palgrave Dictionary of Economics, Steven Durlauf and Lawrence Blume (eds). Palgrave Macmillian Publishing.

Gillingham, K. and J. Sweeney (2010) Market Failure and the Structure of Externalities. In: Harnessing Renewable Energy, Boaz Moselle, Jorge Padilla, Richard Schmalensee (eds). RFF Press.

Gillingham, K., R. Newell, and K. Palmer (2006) The Effectiveness and Cost of Energy Efficiency Programs. In: The RFF Reader in Environmental and Resource Policy, Wallace Oates (ed). RFF Press. 193-201.

Safirova, E., I. Parry, P. Nelson, W. Harrington, **K. Gillingham**, and D. Mason (2004) Welfare and Distributional Effects of HOT Lanes and Other Road Pricing Policies in Metropolitan Washington, DC. In: Road Pricing: Theory and Evidence, Georgina Santos (ed). Elsevier. *Research in Transportation Economics*, 9(1): 179-206.

Non-Peer Reviewed Publications

Gillingham, K. (2022) Assessing Environmental Regulation in Automobile Markets, The Reporter, National Bureau of Economic Research, Issue 1.

Gillingham, K. and S. Weber (2021) Potential and Critical Issues of Electric Vehicles Development. In: The Global Quest for Sustainability: The Role of Green Infrastructure in a Post-Pandemic World, Carlo Secci and Alessandro Gili (eds). ISPI-McKinsey & Company.

Look, W., K. Palmer, D. Burtraw, J. Linn, M. Hafstead, M. Domeshek, N. Roy, K. Rennart, **K. Gillingham**, Q. Xiahou (2021) Emissions Projections for a Trio of Federal Climate Policies, RFF Issue Brief 21-02.

Gillingham, K. (2019) Carbon Calculus: For Deep Greenhouse Gas Emission Reductions, a Long-term Perspective on Costs is Essential, *International Monetary Fund Finance & Development*, 56(4): 6-11.

Gillingham, K., J. Stock, W. Davis (2018) Comments on the Notice of Proposed Rulemaking for The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks, Docket numbers: EPA-HQ-OAR-2018-0283 and NHTSA-2018-0067.

Gillingham, K. (2018) William Nordhaus and the Costs of Climate Change, YaleGlobal Online, reprinted by Voxeu.org.

Bollinger, B., J. Burkhardt, and **K. Gillingham** (2018) Peer Effects in Water Conservation: Evidence from Consumer Migration, Global Water Forum.

K. Gillingham and J. Stock (2016) Federal Minerals Leasing Reform and Climate Policy, *Brookings Hamilton Project*, Policy Proposal 2016-07.

Gillingham, K., The Economics of Fuel Economy Standards versus Feebates, *National Energy Policy Institute* Working Paper.

Bollinger, B. and **K. Gillingham** (2012) Do Peer Effects Matter? Assessing the Impact of Causal Social Influence on Solar PV Adoption, *Photovoltaics International*, 17: 160-165.

Friedland, A. and **K. Gillingham** (2010) Carbon Accounting is a Tricky Business. Letter to the Editor, *Science*, 327(5964): 411-412.

Safirova, E., W. Harrington, P. Nelson, and **K. Gillingham** (2004) Are HOT Lanes a Hot Deal? Analyzing the Potential of HOV to HOT Lanes Conversion in Northern Virginia, RFF Issue Brief 03-03.

Nelson, P., E. Safirova, and **K. Gillingham** (2003) Revving up the Tax Engine: Gas Taxes and the DC Metro Area's Transportation Dilemma, RFF Issue Brief 03-05.

Presentations

2023: AEA Meetings (2 presentations); Stanford University Marketing; Clemson University Applied Micro Seminar; Brookings Papers on Economic Activity Meeting (discussant).

2022: AEA Meetings (discussant & panelist); SUNY-Albany Economics Dept.; Stanford University Sustainability School; U.S. Environmental Protection Agency National Center for Environmental Economics; University of Copenhagen Center for Computational Economics Workshop; University of Calgary Applied Microeconomics Seminar; RWI Liebniz Applied Micro (virtual) seminar; University of Alaska Anchorage Economics Seminar; US Association for Energy Economics Conference; Harvard Climate Political Economy Meeting.

2021: AEA Meetings (presenter & discussant); Yale Planetary Solutions Initiative; University of Tennessee Baker Center for Public Policy Energy and Environment Forum; Michigan State University Applied Microeconomics Seminar; UC Dublin School of Economics; Western States Air Resources Council; University of Montana 'From Science to Policy' Seminar; Ben-Gurion University Faculty of Business & Management; Harvard Environmental Economics Seminar; NBER Environmental & Energy Policy and Economics Conference; ZEW Mannheim Energy Conference (keynote address); Amazon.com; Ifo Institute Climate & Energy Seminar; International Association for Energy Economics; U.S. EPA; U.S. EPA Climate Protection Partnerships Division; Rice University Economics; University of Lausanne/ETHZ/University of Zurich Workshop "Can Economic Policy Mitigate Climate Change;" ETH Zurich; University of Lugano; US Association for Energy Economics Annual Conference (Plenary); Cambridge University; University of Massachusetts-Amherst Resource Economics; Yale Industrial Organization Seminar.

2020: AEA Meetings (presenter in 2 sessions, discussant in one); ETH Zurich Winter Course on Empirical Energy Economics; Empirical Methods in Energy Economics (ETH Zurich, Switzerland); Georgia Tech Ray C. Anderson Center for Sustainable Business; American University Global Economy and Development Seminar; Federal Energy Regulatory Commission; Duke University/TREE Seminar; Harvard Environmental Economics Seminar (Covid-19 cancelled); TU Darmstadt (Covid-19 cancelled); Mannheim Energy Conference Keynote (Covid-19 cancelled); Harvard-Berkeley-Yale Virtual Seminar on Economics of Climate Change and Energy Transition; U.S. Department of Energy EERE; 4th Conference on Structural Dynamic Models Plenary (University of Zurich; Covid-19 cancelled); World Congress of the Econometric Society; U.S. Department of Energy SEEDS Project Workshop; NBER Energy Use in Transportation (discussant); University of Southern California Environment Seminar; UT-Austin Bureau of Economic Geology; Swedish-American Chamber of Commerce for Nordea; NBER Economics of Innovation Meeting (discussant); Stanford Workshop on the Economics of Electrified Transportation (cancelled due to Covid-19); Yale School of the Environment Biomes Seminar;

Advances with Field Experiments Conference (University of Chicago); RFF Workshop on Evaluating Climate-Oriented Economic Recovery Programs; London School of Economics Grantham Climate Change & Environment Seminar; Penn State Integrating Science & Ethics in Climate Risk Management Seminar; IMF World Economic Outlook Report Release Event Discussant; Duke University/TREE Seminar; World Bank/UC Berkeley Infra4Dev Conference; Yale Planetary Solutions Conference.

2019: AEA Meetings (panelist & discussant); Ifo Institute (Munich, Germany); Georgetown University; University of Connecticut ARE; University of Maryland AREC; NBER Conference on the Economics of Energy Use in Transportation; New England Energy Conference (keynote); AERE Summer Conference (Incline Village, CA); New England Conference of Public Utility Commissioners (panelist); Cowles Foundation Structural Microeconomics Summer Conference; Northeast Workshop on Energy Policy & Environmental Economics (Harvard University); Empirical Methods in Energy Economics (Quebec City, Canada); RWI Empirical Environmental Economics Workshop (Essen, Germany); NESCAUM Director's Meeting; Advances with Field Experiments Conference (University of Chicago); University of Alabama; KU Leuven; CESIfo Area Conference on Climate and Energy (Munich, Germany); Georgia Tech Economics; International Monetary Fund Workshop on Climate Change (Washington, DC).

2018: AEA/Econometric Society Meetings (presenter in 2 sessions); Stanford University; UC Berkeley Climate Lunch; UC Berkeley EEE Seminar; Council on Foreign Relations (participant); Cornell University; NBER EEE Spring Meetings; University of Munster; ETH Zurich; NYU Volatility Institute Conference; University of Montpellier Workshop on Energy Economics (keynote); Toulouse School of Economics Workshop on Environmental Regulation & Industrial Performance; ISMS Marketing Science Conference; CT Dept Energy & Environmental Protection; US Association for Energy Economics Plenary Speaker (Washington, DC); CESIfo Area Conference on Climate and Energy (Munich, Germany); Georgia State University Economics, University of Copenhagen URBAN Conference.

2017: AEA Meetings (discussant, panelist, and session presider); U.S. Energy Information Administration; Yale F&ES; International Monetary Fund; Yale Industrial Organization Workshop; Ifo Institute (Munich); University of Connecticut Economics; SEARCH Project Meeting at Yale; International Industrial Organization Conference (Boston, MA); NBER Energy Markets Meeting; Association of Environmental and Resource Economists Annual Meeting (Pittsburgh, PA); Northeast Workshop on Environmental Economics and Energy Policy (Dartmouth); PERC Innovation, Property Rights, and the Structures of Energy (Bozeman, MT); Workshop on the Applications of Industrial Organization (Montreal, Canada); University of Chicago Advances with Field Experiments Conference; Avangrid Leadership Summit; Columbia University Global Energy Policy Center; Harvard Environmental Economics Seminar; CESIfo Area Conference on Climate and Energy (Munich, Germany); BECC Conference (Sacramento), TE3 Conference (UMichigan); CT Dept Energy & Environmental Protection; US Association for Energy Economics (Houston, TX).

2016: AEA Meetings (discussant on 2 papers and session presider); Council on Foreign Relations (participant); Multi-scale Economics Methodologies and Scenarios Workshop (College Park, MD); Yale US-China Renewable Energy Forum (moderator); GTAP Annual Conference on Global Economic Analysis (Washington, DC); Resources for the Future; EMF Workshop on Climate Change Impacts and Integrated Assessment (Snowmass, CO); Camp Resources (Wrightsville Beach, NC); University of Illinois Urbana-Champaign; University of Chicago Advances with Field Experiments Conference; Columbia University; US Association for Energy Economics Plenary Speaker (Tulsa, OK); KAPSARC Energy Dialogue (Riyadh, Saudi Arabia); Brookings Hamilton Project.

2015: AEA Meetings (presenter, discussant on 4 papers, and session presider); ICLEI Rooftop Solar Challenge/Solar Market Pathways webinar; RWTH Aachen University (Aachen, Germany); Penn State Environmental Economics seminar; International Industrial Organization Conference (Boston, MA); Northeast Workshop on Energy Policy & Environmental Economics (Yale); Association of Environmental & Resource Economists Summer Conference (San Diego, CA); University of Strathclyde

(Glasgow, Scotland); Empirical Methods in Energy Economics Workshop (UMaryland); EMF Workshop on Climate Change Impacts and Integrated Assessment (Snowmass, CO); World Congress of the Econometric Society (Montreal, Canada); Heartland Environmental & Resource Economics Workshop (UIUC); National Academy of Sciences; World Bank Applied Micro seminar.

2014: AEA Meetings (presenter of 2 papers, discussant on 2 papers, and session presider); University of Copenhagen Economics; Indiana University SPEA; University of Michigan Economics; Clean Energy States Alliance (Webinar); Environmental Defense Fund Applied Environmental Economics Seminar; University of Chicago Booth; Duke Social Cost of Carbon Workshop; US Association for Energy Economics (New York, NY); KAPSARC Drivers of Transportation Workshop (Washington, DC); 6th Atlantic Workshop on Energy and Environmental Economics (A Toxa, Spain); Stanford Institute for Theoretical Economics (SITE) Empirical Implementation of Theoretical Models of Strategic Interaction and Dynamic Behavior Workshop (Stanford, CA); NBER Environmental & Energy Economics Summer Institute (Cambridge, MA); EMF Workshop on Climate Change Impacts and Integrated Assessment (Snowmass, CO); NSF SCRiM Summer School at Penn State (State College, PA); Resources for the Future; Ecole de Mines-ParisTech CERNA (Paris); CIRED (Paris); Paris-Dauphine University/Mines-ParisTech/Ecole Normale (Keynote); Indiana University Kelley School of Business; National Low-Carbon Case Competition Keynote (Yale SOM); Yale Presidential Carbon Charge Task Force Meeting; Harvard Seminar on Environmental Economics and Policy; RFF Workshop on Benchmarking and Disclosure; Behavior, Energy, and Climate Change (BECC) Conference (Washington, DC); LBNL Webinar.

2013: AEA Meetings (discussant); Modeling Uncertainty Project Meeting (New Haven, CT); FES/SOM Yale Environmental Economics Seminar; Carnegie-Mellon University; Villanova Law; Arizona State University Economics of Water Workshop (Keynote); International Industrial Organization Conference (Cambridge, MA); AERE Summer Conference (Banff, AB); Empirical Methods in Energy Economics Workshop (Carlton University, Ottawa); DOE Sunshot Kick-off Meeting; EMF Workshop on Climate Change Impacts and Integrated Assessment (Smowmass, CO); Stanford Institute for Theoretical Economics (SITE) Advances in Environmental Economics Workshop; Columbia University SIPA; Indiana University Kelley School of Business; Tsinghua University Institute of Energy, Environment, and Economy; Fudan University Economics; Duke-Harvard Energy Efficiency Workshop (at Harvard KSG); Indiana University SPEA; Behavior, Energy, and Climate Change (BECC) Conference (Sacramento, CA); Resources for the Future Workshop on CAFE Standards; Connecticut Clean Energy Finance & Investment Authority.

2012: AEA Meetings (presenter); Yale FES Seminar Series; Lawrence Berkeley National Laboratory/DOE Sunshot Initiative Workshop; Triangle Resource & Environmental Economics seminar (Duke, NCSU, UNC); Indiana University Kelley School of Business/Economics/SPEA; University of Massachusetts Amherst Resource Economics; Rice University Economics; Texas A&M Economics; UC Santa Cruz Economics; Naval Postgraduate School Economics; UC Santa Barbara Economics/Bren School; ETH Zurich Economics; University of Lugano Economics; AERE Summer Conference (Asheville, NC); EMF Workshop on Climate Change Impacts and Integrated Assessment (Smowmass, CO); Connecticut Clean Energy Finance & Investment Authority; UC Berkeley/Lincoln Institute of Land Policy Conference; University of Colorado Boulder Economics; University of Wyoming Economics; US Association for Energy Economics (Austin, TX); University of Connecticut ARE; University of Copenhagen Economics.

2011: University of Maryland AREc; Indiana University SPEA; UC Davis Economics; University of Arizona Economics; Arizona State University Economics; University of Illinois Urbana-Champaign Finance; University of Notre Dame Economics; Yale University FES; Informing Green Markets Conference (University of Michigan); Cowles Foundation Structural Microeconometrics Conference (Yale University); Empirical Methods in Energy Economics Workshop (Southern Methodist University); Harvard Seminar on Environmental Economics and Policy; Re-examining the Rebound Effect in Energy Efficiency Workshop (Environmental Defense Fund); RFF-Stanford Workshop on the Next Round of Climate Economics and Policy Research (Washington, DC); US Association for Energy Economics (Wash-

ington, DC); Workshop on Environmental and Transportation Policies to Mitigate Climate Change (New York University); Religare Capital Markets (Singapore); Behavior, Economics, and Energy Panel (National University of Singapore Energy Studies Institute); University of Copenhagen Economics.

2010: UC Berkeley Energy Institute; NBER EEE Summer Institute; World Congress Env & Resource Economists (Montreal); US Association for Energy Economics (Calgary); Behavior, Energy & Climate Change (BECC) Conference; 12th Occasional California Workshop on Environmental and Resource Economics; UC Davis ARE; Resources for the Future.

2009: UC Berkeley ARE; Stanford IO Workshop; DOE EIA Advisory Council; US Association for Energy Economics (San Francisco); UC Energy Institute CSEM Conference.

2008: UC Davis ITS; Victoria University, New Zealand.

2007: University of Auckland Energy Centre, New Zealand; Massey University, New Zealand; International Association for Energy Economics (Wellington, New Zealand).

2006: Dartmouth College Workshop on Technological Change & Environment.

2004: Transportation Research Board Annual Meeting.

Grants

"Patterns and Value of Co-Adoption of Solar and Related Technologies," U.S. Department of Energy, PI, 2021-2024 ($2,053,751)

"Yale-Iberdrola-Avangrid Energy Innovation Collaboration," Avangrid, 'Solar + Storage' Project PI, 2019-2021 ($624,577 total; $247,498 for project).

"Technological Innovation and Per-Mile Automobile Insurance: Effects on Patterns of Vehicle Usage," National Bureau of Economic Research (with support from the U.S. Department of Energy, the National Science Foundation, and the Sloan Foundation), PI, 2018-2019 ($20,000).

"Using Behavioral Science to Target LMI and High-Value Solar Installations," U.S. Department of Energy, PI, 2017-2019 ($1,350,000).

"Household Demand for Solar PV and Price Discriminating Subsidies," National Bureau of Economic Research (with support from the U.S. Department of Energy and the National Science Foundation), co-PI with Steve Sexton and Bryan Bollinger, 2016-2017 ($23,000).

"Solutions for Energy, Air, Climate, and Health (SEARCH)," U.S. Environmental Protection Agency, subproject co-PI with Ben Hobbs, 2015-2020 (~$10,000,000 total; $1,618,814 for project 1).

"Energy Efficiency Field Experiments in New Haven," Yale Center for Business and the Environment, F.K. Weyerhaeuser Memorial Fund, co-PI with Tsvetan Tsvetanov, 2014-2016 ($40,000).

"What are Sustainable Climate Risk Management Strategies?" National Science Foundation (subcontract from Penn State), co-PI with William Nordhaus, 2014-2016 ($164,469).

"The Influence of Novel Behavioral Strategies in Promoting the Diffusion of Solar Energy," U.S. Department of Energy, PI, 2013-2016 ($1,899,978).

"Research in Integrated Assessment Inter-Model Development, Testing, and Diagnostics," U.S. Department of Energy (subcontract from Stanford), with William Nordhaus, 2013-2016 ($232,000).

"Density, Walkability, and VMT," Yale Center for Business and the Environment Sobotka Research Fund, PI, 2013-2014 ($10,100).

"Deep Dive Solar Cost Analysis," Lawrence Berkeley National Laboratory/U.S. Department of Energy, PI, 2013-2016 (Yale budget: $115,000).

"Modeling Household and Transportation Vehicle Choice and Usage," California Air Resources Board, co-PI with Dave Rapson, Chris Knittel, and Pat Mokhtarian, 2012-2014 ($300,000).

"Sunrise New England," US Department of Energy, co-PI with Stuart DeCew, 2012-2014 (Yale budget: $215,000).

"The Consumer Response to Gasoline Price Changes," Stanford Institute for Economic Policy Research (SIEPR) Grant, 2010 ($10,000).

"The Consumer Response to Gasoline Price Changes," Shultz Graduate Student Fellowship in Economic Policy, SIEPR, 2010 ($4,000).

"Economics of New Zealand Solar Distributed Generation," Fulbright Fellowship, 2007.

"The Effect of Income and Congestion on the Rebound Effect of CAFE Standards," U.S. Environmental Protection Agency STAR Fellowship, 2006-2009 ($111,000).

Heitz Graduate Fellowship, Stanford University, 2006.

Battelle Memorial Institute Fellowship, 2001 ($6,000).

Teaching

Yale University

Fall 2022: ENV 905 Ph.D. Environmental and Energy Economics, 7 students + 4 auditors

Fall 2022: ENV 805 Environmental Economics Seminar (co-taught), 5 students + several auditors

Spring 2022: ENV 800 Energy Economics and Policy Analysis, 68 students + 3 auditors

Spring 2022: ENV 805 Environmental Economics Seminar (co-taught), 3 students + several auditors

Spring 2022: ENV 561 Energy Justice Seminar, 41 students + 7 auditors

Fall 2020: ENV 800 Energy Economics and Policy Analysis, 31 students + 6 auditors

Fall 2020: ENV 805 Environmental Economics Seminar (co-taught), 11 students

Spring 2020: F&ES 905 Ph.D. Environmental and Energy Economics, 7 students + 3 auditors

Spring 2020: F&ES 805 Environmental Economics Seminar (co-taught), 9 students + 2 auditors

Fall 2019: F&ES 800 Energy Economics and Policy Analysis, 44 students + 3 auditors

Fall 2019: F&ES 805 Environmental Economics Seminar (co-taught), 9 students + 2 auditors

Spring 2019: F&ES 805 Environmental Economics Seminar (co-taught), 4 students + 3 auditors

Fall 2018: F&ES 800 Energy Economics and Policy Analysis, 44 students

Fall 2018: F&ES 805 Environmental Economics Seminar (co-taught), 6 students + 4 auditors

Spring 2017: F&ES 905 Ph.D. Environmental and Energy Economics, 7 students + 1 auditor

Spring 2017: F&ES 805 Environmental Economics Seminar (co-taught), 14 students

Spring 2017: F&ES 800 Energy Economics and Policy Analysis, 51 students

Fall 2016: F&ES 805 Environmental Economics Seminar (co-taught), 18 students

Spring 2015: F&ES 905 Ph.D. Environmental and Energy Economics, 6 students + 2 auditors

Spring 2015: F&ES 805 Environmental Economics Seminar (co-taught), 5 students + 10 auditors

Spring 2015: F&ES 800 Energy Economics and Policy Analysis, 40 students

Fall 2014: F&ES 805 Environmental Economics Seminar (co-taught), 11 students

Spring 2013: F&ES 800 Energy Economics and Policy Analysis, 43 students

Spring 2013: F&ES 805 Environmental Economics Seminar (co-taught), 17 students

Fall 2012: F&ES 904 Ph.D. Environmental and Energy Economics, 16 students

Fall 2012: F&ES 805 Environmental Economics Seminar (co-taught), 22 students

Spring 2012: F&ES 805 Environmental Economics Seminar (co-taught), 10 students

Fall 2011: F&ES 505 Economics of the Environment, 68 students

Fall 2011: F&ES 805 Environmental Economics Seminar (co-taught), 15 students

Assorted guest lectures for Yale courses (2-3 per year).

National Science Foundation SCRiM Summer Institute (Penn State)

Integrated Assessment Modeling Tutorial.

Stanford University (Teaching Assistant)

Ph.D. Microeconomics, Introductory Econometrics, Natural Resource Economics (Graduate), Transportation Policy (Graduate), Energy Policy Analysis (Graduate), Energy & Environmental Policy Analysis (Graduate), Climate Policy Analysis (Graduate), Principles of Economics

Advising

Current Advisees

Ph.D. Primary Advisor

Simon Lang (4th year), Jocelyn La Fleur (1st year)

Ph.D. Committee Member

Matt Gordon (5th year), Winston Hovekamp (econ 4th year), Michael Blair (SOM Operations 4th year), Gabe Gadsden (YSE 2nd year), Connor Forsyth (CMU 4th year)

Post-doc Advisor

Asa Watten, Xingchi Shen, Stephanie Weber

Masters Independent Study Advisor

Tyler Stotland (MESc '23), Weixi Wu (MESc '23), Gabe Snashall (MESc '23), Seung Min Kim (MESc '23)

Undergraduate Senior Essays

Tracy Zhou (econ '23), Naomi Shimberg (EPE '23), Evan Lipton (SDS '23)

Advisee Alumni

Ph.D. Primary Advisor

Paul Wolfram '21 (Joint Global Change Research Institute post-doc)

Peter Berrill '21 (Marie Curie Fellowship at TU Berlin)

Stephanie Weber '21 (Yale post-doc)

Wade Davis '21 (U.S. EPA NCEE)

Hao Deng '20 (Yale post-doc; OnLocation consultancy)
Paige Weber '19 (UNC Chapel Hill)
(co-advised) Jesse Burkhardt '16 (Colorado State University)

Ph.D. Committee Member (first placement; current position)

Zihan Zhuo '20 (Fudan University)
Jonghyun Yoo '20 (Georgia Tech post-doc)
Nicholas Snashall-Woodhams '20 (UT Austin McCombs)
Jake Ward CMU'20 (US Dept of Energy)
Arthur Yip CMU'20 (NREL)
Evan Sherwin CMU'19 (Stanford post-doc)
Tamar Makov '19 (Ben-Gurion University)
Waldemar Marz LMU Munich'19 (Ifo Institute post-doc)
Kellie Stokes '18 (NASA)
Nikki Springer '18 (MugenKioku Consultants)
Gil DePaula '17 (Iowa State University)
Marcelo Sant'Anna '16 (FGV/EPAVB Brazilian School of Public & Business Administration)
Peter Christensen '15 (University of Illinois, Urbana-Champaign)
Richard Langford '15 (Bates White Consulting)
Laura Bakkensen '14 (University of Arizona)
Nathan Chan '14 (Colby College; UMass-Amherst)
Alan Jenn CMU'14 (Carnegie-Mellon post-doc; UC Davis)
Marcello Graziano UConn'14 (University of the Highlands post-doc; Southern Connecticut State)

Former Post-doctoral Scholars (first placement)

Andres Gonzales-Lira '22 (PUC Chile)
Marta Talevi '22 (VU Amsterdam)
Marten Ovaere '20 (University of Ghent)
Pei Huang '20 (ZWI Mannheim)
Stefano Carattini '18 (Georgia State University)
Stefan Lamp '16 (Toulouse School of Economics Research Fellow)
Tsvetan Tsvetanov '15 (University of Kansas)

Masters Thesis Advising

Lucy Shim (McKinsey), Hilary Staver (E3), Paige Weber (Ph.D. student at F&ES), Robert Fetter (Ph.D. student at Duke)

MEM Independent Study

Howard Chang (MEM/MBA '12), Dustin Schinn (MEM '13), Peter Baum (MEM '13), Vijeta Jangra (MEM '13), Jessie Shoemaker (MEM '15), Rebecca Gallagher (MEM/MBA '15), Benjamin Dawson (MEM '16), Sarah Freel (MEM '15), Elizabeth Youngblood (Harvard MEM '15), Emily Wier (MEM '17), Erik Lyon (MEM '19), Nate Grady (MEM '19), Jane Culkin (MEM '19), Tim Bialecki (MEM '19), Corey Cantor (MEM '19), Zach Ratner (MEM '19), Daniel Csonth (MEM '20), Tyler Clevenger (MEM '21), Akshyah Krishnakumar (MEM '22), Elizabeth Stagg (MEM'22)

Undergraduate Senior Essays

Ana Grajales (economics '13), Daniel Cheng (math-econ '13), Blake Hofmeister (economics '15), Brandon Blaesser (economics\env. studies '15), Sade Kammen (poli sci '19), Kevin Liang (env. studies '19), William Arnesen (economics '20), Will Mukamal (EVST/ECON '22), Ryley Constable (ECON '22)

Masters Advisees

80+ Advisees since 2011.

Service to Yale

Yale Advisory Committee on Investor Responsibility (2022-present)
Yale Standing Advisory and Appointments Committee for the School of Management and Yale Jackson School of Global Affairs (2022-present)
MESc/MF Admissions Committee (2023)
YSE Urbanization and the Environment Search Committee (2022-present)
YSE Expanded Learning Innovation (ELI) Committee (2022-present)
Yale School of the Environment Energy Specialization Chair (2018-present)
Yale College Energy Studies Advisory Committee (2016-present)
Yale F&ES Research Committee (2019-2021)
Yale F&ES Masters Program Committee (2018-2021)
Yale University President's Task Force on Decarbonization (2019-2020)
Yale F&ES Faculty Search Planning Committee (2019-2020)
Yale F&ES Community and Governance Committee (2019-2020)
Yale F&ES Strategic Vision Committee (2016-2017)
Yale Climate & Energy Institute (YCEI) Steering Committee (2013-2015)
Yale Carbon Pricing subcommittee (2015)

Honors and Awards

2022 ISM Gary Lilien Practice Prize Competition Finalist (for Bollinger et al.), 2022
AMA-EBSCO Responsible Research in Marketing Award (for Kraft-Todd et al.), 2020
USAEE/IAEE 2019 Working Paper Best Paper Award, 2020
Full Member, Sigma Xi, 2011
Dennis O'Brian Best Student Paper Award, US Association for Energy Economics, 2010
Thesis and Research Essay Publication Scholarship, University of Auckland, 2006
Outstanding Teaching Assistant Award, Stanford Economics, 2006
National Science Foundation Graduate Fellowship, Honorable Mention, 2006
American Water Works Association Best Paper Award, 2006
Departmental Honors, Dartmouth Economics, 2002
Departmental High Honors, Dartmouth Environmental Studies, 2002
Associate Member, Sigma Xi, 2002
First Prize, Dartmouth Sigma Xi Senior Thesis Competition, 2002

Professional Service

Leadership in Professional Organizations

Vice President of Academic Affairs, U.S. Association for Energy Economics, 2021-present

Editorial Boards

Editorial Board of *Energy Journal*, 2017-present

Editorial Board of *Energy Efficiency*, 2016-present

Conferences Co-Organized

Empirical Methods in Energy Economics Workshop (Jan 9-10, 2023 at Yale)
Northeast Workshop on Energy Policy & Environmental Economics (June 14-15, 2021 at UPenn)
Empirical Methods in Energy Economics (currently scheduled for January 3-5, 2021 at Yale)
Northeast Workshop on Energy Policy & Environmental Economics (June 13-14, 2019 at Harvard)
Northeast Workshop on Energy Policy & Environmental Economics (May 17-18, 2018 at Columbia)
Northeast Workshop on Energy Policy & Environmental Economics (June 13-14, 2017 at Dartmouth)
Empirical Methods in Energy Economics (July 9-10, 2015 at UMD)
Northeast Workshop on Energy Policy & Environmental Economics (May 21-22, 2015 at Yale)
Yale Workshop on Uncertainty in Climate Change (Nov 21, 2013 at Yale)
Northeast Workshop on Energy Policy & Environmental Economics (May 10-11, 2013 at Cornell)
Modeling Uncertainty in Climate Policy Workshop (Feb 4, 2013 at Yale)

Advisory Boards

External Advisory Committee for Alfred P. Sloan Foundation Energy & Environment Program, 2021-present
Scientific Council for FAUST Research Project (Munich), 2020-present
Network Organizer for Empirical Methods in Energy Economics International Network, 2019-present
Executive Committee, External Environmental Economics Advisory Committee for the U.S. EPA, 2018-2021
Nominating Committee for AERE Board, 2019
Scientific Advisory Board, RFF Social Cost of Carbon Initiative, 2018-present
External Advisory Board, CMU Center for Climate and Energy Decision Making, 2018-present

Referee Service

Economics Journals: *American Economic Journal: Applied, American Economic Journal: Economic Policy, American Economic Review, American Economic Review: Insights, American Journal of Agricultural Economics, B.E. Journal of Economic Analysis & Policy, Climate Change Economics, Eastern Economic Journal, Economic Journal, Economica, Economics of Energy & Environmental Policy, Economics of Transportation, Ecological Economics, Energy Economics, Energy Journal, European Economic Review, Environmental & Resource Economics, International Economic Review, Journal of the Association of Environmental and Resource Economists, Journal of Business & Economic Statistics, Journal of Choice Modelling, Journal of Econometrics, Journal of Economic Behavior & Organization, Journal of Economic Surveys, Journal of Economic Theory, Journal of Economics & Management Strategy, Journal of Environmental Economics & Management, Journal of Industrial Economics, Journal of Institutional & Theoretical Economics, Journal of Law & Economics, Journal of Public Economics, Journal of Political Economy, Journal of Urban Economics, Management Science, Marketing Science, Oxford Economic Papers, Quantitative Economics, Quarterly Journal of Economics, RAND Journal of Economics, Regional Science & Urban Economics, Resource & Energy Economics, Review of Economics & Statistics, Review of Economic Dynamics, Review of Economic Studies, Review of Environmental Economics & Policy, Review of Industrial Organization, Scandinavian Journal of Economics, Southern Economic Journal, The Manchester School, World Bank Economic Review.*

Environment/Engineering/Policy/Science Journals: *Annual Review of Environment & Resources, Applied Energy, Building Research, Cityscape, Climatic Change, Energies, Energy, Energy & Fuels, Energy Efficiency, Energy Policy, Energy Strategy Reviews, Energy Research & Social Science, Environment & Behavior, Environment Development & Sustainability, Environmental Modeling & Assessment, Environmental Research Letters, Environmental Science & Technology, Environmental Sociology, Frontiers in Energy Research, Food Policy, Global Environmental Change, IEEE Transactions on Power Systems, IEEE Transportation Electrification, International Journal of Sustainable Transportation, Journal of Cleaner Production, Journal of Environment & Development, Journal of Industrial Ecology, Journal of Policy Analysis & Management, Journal of Sustainable Forestry, Mitigation & Adaptation Strategies for Global Change, Nature, Nature Climate Change, Nature Communications, Nature Energy, PLOS One, Proceedings of the National Academy of Sciences, Science, Sustainable Cities and Society, Transportation Research A, Transportation Research D, Utilities Policy.*

Review Service

AERE Summer Conference Review Committee, Alfred P. Sloan Foundation, Alliance for Research on Corporate Sustainability, Danish Council for Strategic Research, KU Leuven, Leibniz Programme for Women Professors (Germany), MIT Press, National Academy of Sciences Transportation Research Board, National Science Foundation, National Renewable Energy Laboratory, National Research Council (NRC) of the National Academy of Sciences, Princeton University Press, Singapore Ministry of Education, Swiss National Science Foundation, Czech National Science Foundation, UNC Water Resources Research Institute, U.S. Department of Energy Quadrennial Technology Review, U.S. Environmental Protection Agency

Expert Review Panels

National Academy of Sciences panel (invited; declined while at the White House), Connecticut Academy of Science & Engineering expert panel (Oct 2014-Feb 2015), US Department of Energy expert panel to inform the Quadrennial Technology Review (Nov 13, 2014), USAEE Student Best Paper Award Selection Committee (February/March 2014), US Department of Agriculture NIFA Climate Change Adaptation expert review panel (Aug 1-2, 2013), US Department of Energy review panel (April 26, 2013), US Department of Agriculture NIFA Bioenergy Policy expert review panel (Apr 19-20, 2012)

External Engagement

Primary economics expert witness/consultant to California Attorney General's office on fuel economy standards

Advisory assistance to Connecticut Dept of Energy and Environmental Protection, Connecticut Green Bank, and Center for Applied Environmental Law & Policy

Professional Affiliations

American Economic Association, Association of Environmental and Resource Economists, Econometric Society, Industrial Organization Society, United States Association for Energy Economics

In the Media

Connecticut Public Radio: "A Yale Professor Says Blame Putin for Big Eversource and UI Electric Rate Hikes," Nov 29, 2022
WFSB Eyewitness News Channel 3: "Why Are Energy Prices Higher in CT Than Across the Country?" Nov 17, 2022

GW Hatchet: "Solar panel costs drop with global trading, SEAS professor finds," Nov 7, 2022
Daily Mail: "End of the Road: NY Will Join California in Banning Sale of New Gas-Powered Cars by 2035," Oct 3, 2022
Yale News: "YSE Experts React to Major Federal Climate, Energy Investment," Aug 11, 2022
JStor Daily: "How Much Does it Cost to Reduce Carbon Emissions?," Jul 15, 2022
Courier Journal: "Food or Gas? As Louisville Pump Prices Rise to Almost $5, Experts have Dire Warning," Jun 3, 2022
Financial Post: "Electric Vehicles Seen As 'Springboard' for Revival of Canada's Auto Industry," May 11, 2022
Yale Daily News: "Yale's Labs Aim to Address Chronic Energy Inefficiency," Apr 28, 2022
Popular Science: "Car Owners: Here's When Experts Say You Should Switch to an EV," Apr 25, 2022
CT Mirror: "CT Plans a Green Hydrogen Path, But it has Potholes," Apr 13, 2022
NBC WHO 13 Des Moines: "Still Rare in Iowa, Electric Car Powers Des Moines FamilyâĂŹs Home During Blackouts," Apr 8, 2022
Connecticut Public Radio: "Connecticut Drivers Are Getting A Reprieve from Steep Gas Prices, But Social Costs Remain High," Apr 1, 2022
WHO13 Des Moines: "In the Race for Electric Cars, Biofuels Hold Iowans Back," Apr 1, 2022
CT News Junkie: "Direct-to-Consumer EV Enthusiasts Try Again," Mar 15, 2022
Popular Science: "What the Bans on Russian Fossil Fuels Actually Mean," Mar 10, 2022
Washington Post: "Pence-backed Ad Falsely Blames Biden for Hike in Purchases of Russian Oil," Mar 9, 2022
CleanTechnica.com: "Yale Study Puts the Kibosh on EV Emissions Myth," Feb 23, 2022
New York Times: "Why This Could be a Critical Year for Electric Cars," Jan 8, 2022
Energy News Network: "Groups Urge Bigger Targets, More Equity as RGGI States Consider Changes," Dec 21, 2021
Yale News: "Solar on the American Mind," Dec 1, 2021
BBC News (TV): "COP26 China-US Announcement," Nov 11, 2021
BBC Radio 5: "Interview on China-Us Announcement," Nov 10, 2021
Sierra: "Revolutionizing the Transportation System Means Cleaning Up the Nation's Ports," Oct 27, 2021
DW.com: "Do France's Plans for Small Nuclear Reactors Have Hidden Agenda?" Oct 22, 2021
Vice: "From Soda to Blackouts, A Global Gas Crisis is Causing Havoc," Oct 12, 2021
Forbes: "Carbon Tax Floated On Capitol Hill, While Similar Proposals Fall Flat in Blue States," Sep 30, 2021
Ideas.Ted.com: "Here's How Your Climate-Related Choices are Contagious (in a Good Way!)," Sep 23, 2021
World Economic Forum: "Here's How Efficient Building Design Can Save Lives and Energy," Sep 17, 2021
NPR Marketplace Morning Report: "Investment in Solar Power Key to Biden's Green Energy Goals," Sep 9, 2021
Anthropocene: "Researchers Calculated How Many Lives Energy-Efficient Buildings Could Save," Aug 31, 2021
The Science Times: "Energy Efficiency in the US Buildings Could Decrease Thousands of Annual Premature Deaths Due to Particulate Matter," Aug 23, 2021
News-Medical/Life Sciences: "Energy-Efficient Buildings Could Prevent Thousands of Premature Deaths Every Year," Aug 20, 2021
Washington Post: "Sales of Hybrid Cars are Surging. That's a Good Sign for the Future of Electric Vehicles, Experts Say," Aug 6, 2021
E&E News: "Biden Car Rules May Backfire on EVs - Report," Jul 29, 2021
The Economic Times (India Times): "Consumers Understand Climate Science Better Now - Their Ecological Choices are Shaped by Peers, Visibility, and Messaging," Jul 3, 2021

Anthropocene: "Hitting Climate Targets Depends on Building Smaller Homes and More Multifamily Units–Not Just Energy Efficiency," May 11, 2021
E&E News: "Study Warns Housing Trends Could Cancel Out CO_2 Cuts," May 11, 2021
YaleNews: "What is Driving Reductions in Residential Greenhouse Gas Emissions in the U.S.?" May 5, 2021
E&E News: "Carbon Price Could Hike Coal Use for EVs–Study," Apr 30, 2021
E&E News: "Solar 'Contagiousness': A Key for Environmental Justice?" Apr 29, 2021
Yale Daily News: "Yale Creates New Principles for Divestment from Fossil Fuels," Apr 16, 2021
YaleNews: "New Principles Regarding Fossil Fuels to Guide Yale's Endowment," Apr 16, 2021
National Geographic: "Gas Heat and Stoves are Warming the Climate. Should Cities Start Banning Them?" Apr 2, 2021
Green Car Congress: "UMD Collaborative Study Finds that Fuel Efficiency of One Car in Household May be Cancelled by Next Car Purchase," Mar 3, 2021
Economist: "What is the Cheapest Way to Cut Carbon?" Feb 22, 2021
Politifact: "Joe Biden: 84% of All New Electric Capacity Planned This Year is Clean Energy," Jan 27, 2021
LiveScience: "What is Renewable Energy? Is Renewable Energy Better than 'Dirty' Fossil Fuels?" Jan 3, 2021
Popular Science: "Your Retirement Account Can Also Help Protect the Environment," Dec 31, 2020
Popular Science: "Switching Your Bank Might Help Slow the Climate Crisis," Dec 29, 2020
CT Mirror: "CT Signs on to Regional Plan to Cut Transportation Emissions," Dec 21, 2020
E&E News: "Renewable Targets May 'Undermine' CO_2 Goals - Report," Nov 19, 2020
Mic: "California is Banning Gas-Powered Car Sales. Here's How it Will Work," Sep 24, 2020
New York Times: "Behavioral Contagion Could Spread the Benefits of a Carbon Tax," Aug 19, 2020
Nature: "Self-interest Powers Decision to Go Solar," Aug 12, 2020
Scientific American: "COVID Pandemic-19 Shows Telecommuting Can Fight Climate Change," Jul 22, 2020
Environmental Health News: "Beyond the 'Silver Lining' of Emissions Reductions: Clean Energy Takes a Covid-19 Hit," Jul 9, 2020
Yale Alumni Magazine: "Driving Lessons: People Underestimate the Cost of Owning a Car," Jul/Aug 2020
Phys.org: "Climate Economics Nobel May Do More Harm Than Good," Jul 6, 2020
Financial Post/Bloomberg Green: "Drastic Covid-19 Slowdown May Hinder Any Green Recovery," Jun 30, 2020
E&E News: "Electricity, Covid-19 and Carbon: 3 Issues to Watch," Jun 26, 2020
E&E News: "Clean Energy Crash Could Spur 15-year CO_2 Spike–Study," Jun 24, 2020
DowntoEarth: "Green Energy Funding Delays to Offset Covid-19 Environmental Gains: Study," Jun 24, 2020
Engineering & Technology: "Pandemic-related Carbon Reduction Could be Offset by Faltering Economies," Jun 23, 2020
BBC (Radio): "World Business Report," Jun 5, 2020
Carbon Brief: "Fuel Savings in US Cars Have 'Cut 17Bn Tonnes of CO_2 Since 1975," May 19, 2020
USA Today: "Fact Check: The Coronavirus Pandemic Isn't Slowing Climate Change," May 11, 2020
Energy News Network: "Against Headwinds, Connecticut Lays Out Path to Put More Electric Vehicles on the Road," May 5, 2020
DW.com: "Working from Home, Even When the Coronavirus Crisis Has Passed," May 1, 2020
Welt.de (German-language): "Car Costs," Apr 29, 2020
Christian Science Monitor: "Bluer Skies, Less Greenhouse Gas. What Happens After the Pandemic?" Apr 29, 2020
Yale News: "If People Grasped the Full Cost of Cars, They Might Make Greener Choices," Apr 23, 2020

Suddeutsche Zeitung (German-language): "(Much) More Expensive Than You Think," Apr 22, 2020
Lewiston Morning Tribune: "COVID-19 Has Not Canceled Earth Day," Apr 21, 2020
New York Times: "A Crash Course on Climate Change, 50 Years After Earth Day," Apr 19, 2020
Wired: "Solar Panels Could Be the Best Fad Ever," Apr 1, 2020
Yale News: "The Complex Implications of COVID-19 on Global Energy Markets, Consumer Behaviors," Mar 23, 2020
Washington Post: "Coronavirus Could Halt the World's Emissions Growth. Not that we Should Feel Good About That," Mar 6, 2020
The Atlantic: "Thy Neighbor's Solar Panels," March 2020 issue
el Ágora (in Spanish): "Fighting the Climate Crisis Comes at a Price: Change Your Lifestyle," Feb 21, 2020
BBC Beyond the 9-to-5: "Why Working from Home Might be Less Sustainable," Feb 21, 2020
Washington Post: "How Peer Pressure Can Help Stop Climate Change," Feb 20, 2020
Slate: "How Much Can Jeff Bezos' $10 Billion Do to Fight Climate Change," Feb 19, 2020
E&E News: "Warming Could Drop Grid 'Reliability' 16% – Study," Feb 18, 2020
Denver Post: "Is Natural Gas a Bridge Fuel Too Far with the Rise in Renewables? It Depends on Who You Ask," Jan 31, 2020
CNBC Asia Squawk Box: "Carbon Calculus," Jan 19, 2020
Yale Climate Connections: "Power Plant Emissions Down 47% Under RGGI," Jan 16, 2020
Washington Post, "Oil Lobby Fends Off 2020 Candidates' Calls to Ban Fracking with New Ad Campaign," Jan 8, 2020
Bloomberg Quint, "A $1 Billion Solar Plant Was Obsolete Before it Ever Went Online," Jan 6, 2020
Karma Impact, "As Wind Turbines Age, Recycling Blades Poses a Problem," Dec 18, 2019
Times of Indian, "Technological Advanced Nations Need to do a Long-term Cost-benefit Analysis at COP 25," Dec 4, 2019
Washington Post, "The world needs a massive carbon tax in just 10 years to limit climate change, IMF says," Oct 10, 2019
Cal Matters, "California's Fight Over Tailpipe Emissions, Explained," Aug 31, 2019
Top of Mind with Julie Rose (SiriusXM/BYU Radio), "Trump Administration Wants to Ease Restrictions on Automakers. Ford, Honda, VW & BMW Say 'No Thanks'," Aug 6, 2019
E&E News: "Career Staff Fueled Blitz on Climate Models," Aug 2, 2019
The Atlantic: "A Very Important Climate Fact that No One Knows," May 8, 2019
Tuck School: "The Key to Energy Conservation? Priming Consumers with Price," May 7, 2019
BBN News: "The High Costs of Renewable Portfolio Standards," May 7, 2019
FactCheck.org: "The Facts on Fuel Economy Standards," May 3, 2019
Grid Philly: "The Solar Network: The Number One Factor that Influences Whether People Adopt Solar? If Their Neighbors Install Panels First," Apr 30, 2019
Grist: "Energy Equity: Bringing Solar Power to Low-Income Communities," Apr 14, 2019
WNPR All Things Considered: "In Connecticut, the Costs and Benefits of Shared Solar are Tough to Calculate," Mar 18, 2019
The New Yorker: "The False Choice Between Economic Growth and Combatting Climate Change," Feb 4, 2019
Connecticut Mirror: "CT's Clean Energy Battles Transition From Malloy to Lamont," Dec 15, 2018
Ars Technica: "Eleven Researchers Publish Sharp Critique of EPA Fuel Economy Logic," Dec 9, 2018
Newsweek: "Fuel Economy Rollback Skewed Data to Justify Controversial Halt to Obama-Ere Rules, Study Finds," Dec 7, 2018
E&E News: "Researchers Decry 'Misrepresented' Findings in Rollback Plan," Dec 7, 2018
LA Times: "Trump Fuel Economy Rollback is Based on Misleading and Shoddy Calculations, Study Finds," Dec 6, 2018
Colorado Sun: "Jared Polis Wants Colorado 100 Percent Powered by Renewable Energy," Nov 26, 2018
CEO Magazine: "What to do When you Can't Price Carbon," Nov 13, 2018

LiveMint: "Clean Energy Might be Viable in the Long Run," Nov 6, 2018
Bloomberg News: "Trump Car Standards Rollback Knocked for Faulty Analysis," Nov 2, 2018
The Atlantic: "The Trump Administration Flunked Its Math Homework," Oct 31, 2018
Slate: "Reducing Your Carbon Footprint Still Matters," Oct 26, 2018
Yale News/Phys.Org: "Want to Nudge Others to Install Solar? Actions Speak Louder," Oct 24, 2018
Daily Beast: "The Secret to Making Green Tech Like Solar Panels Go Mainstream," Oct 24, 2018
UtilityDive: "Can the Price of Rooftop Solar Keep Falling?" Oct 18, 2018
Eurasia Review: "The Costs of Climate Change - Analysis," Oct 16, 2018
New Haven Register: "Yale's Nordhaus Wins Nobel Prize in Economics for Work in Climate Change," Oct 9, 2018
New York Times: "Trump Put a Low Cost on Carbon Emissions: Here's Why it Matters," Aug 23, 2018
Nature Energy Research Highlight: "Feel the Nudge," Aug 8, 2018
KCBS News Radio (San Francisco): "Trump's Fuel Economy Rollback," Aug 3, 2018
New York Times: "Opinion: A Reckless Scheme on Auto Emissions," Aug 2, 2018
Seattle Times: "Will Weaker Fuel Rules Make Roads Safer? Experts Doubt It," Aug 2, 2018
Forbes: "Inconsistencies and Uncertainties Over Trump Administration's Fuel Economy Freeze," Aug 2, 2018
New York Times: "Trump Officials Link Fuel Economy Rules to Deadly Crashes. Experts Are Skeptical," Aug 2, 2018
Bloomberg: "Safety Claims in Trump's Auto Efficiency Rollback Draw Skeptics," Jul 27, 2018
Canton Daily Ledger: "Knight Column: Good News for Farmers and the Environment," Jul 23, 2018
Science Daily: "Uncertainty in Long-run Economic Growth Likely Points Toward Greater Emissions, Climate Change Costs," May 15, 2018
Yale News: "We May Be Underestimating Future Economic Growth, and its Potential Climate Effects," May 14, 2018
WNPR: "Can a Carbon Price Really Catch On?" Feb 2, 2018
New York Times: "Yale Tries a Carbon Tax," Dec 13, 2017
Sacramento Bee: "Another Argument for Carbon Tax: How Car Buyers Behave," Dec 12, 2017
Energy Intelligence New Energy: "Finding Carbon's True Cost a Tricky Feat," Nov 23, 2017
Yale Daily News: "Paper Assess Yale Carbon-pricing Model," Nov 14, 2017
Yale News: "Putting Value on Carbon Can Lower Energy Use, Campus Experiment Shows," Nov 3, 2017
The Drive: "2-Vehicle Households More Likely to Choose a Second Car with Worse Gas Mileage," Oct 26, 2017
The Michigan Daily: "TE3 Conference Explores the Future of Transportation," Oct 22, 2017
Jefferson Public Radio: "My Other Car is a Gas Guzzler (Or Electric)," Oct 2, 2017
ClimateWire: "Fuel-efficient Cars Enable SUV Purchases–Study," Sep 27, 2017
San Francisco Chronicle: "Fuel-efficient Cars Often Paired with Gas Guzzlers, Study Finds," Sep 26, 2017
Yale News: "University Begins Carbon Charge Project," Sep 19, 2017
Yale News: "Yale Launches Carbon Charge for Campus Buildings and Departments," Sep 11, 2017
Washington Post: "Is the Most Powerful Lobbyist in Washington Losing its Grip?" Jul 14, 2017
KXAN TV Station (Austin, TX): "Keeping up with the Joneses: Google Wants You to Go Solar," Jun 23, 2017
MNN.com: "Thinking About Going Solar? Google Adds Peer Pressure Into the Mix," Jun 19, 2017
Inverse: "Google Project Sunroof Wants to Create FOMO About Solar Panels," Jun 12, 2017
TechSpot: "Google's Project Sunroof Now Shows Which Homes in Your Neighborhood Are Harnessing the Sun's Power," Jun 12, 2017
Mashable: "Google Wants to Guilt You Into Installing Solar Panels on Your Roof," Jun 12, 2017
The Atlantic: "Google's New Product Puts Peer Pressure to a Sunny Use," Jun 12, 2017
Waterloo Cedar Falls Courier: "Leaving Paris Accord Disingenuous," Jun 5, 2017

Vox.com: "The 5 Biggest Deceptions in Trump's Paris Climate Speech," Jun 2, 2017
Verge.com: "Trump Used Misleading Job Stats to Justify Pulling Out of the Paris Climate Agreement," Jun 1, 2017
Mic.com: "Trump Pulling Out of the Paris Climate Deal Would be Bad for the Economy, Too," Jun 1, 2017
Politfact: "Fact-checking Donald Trump's Statement Withdrawing from the Paris Agreement," Jun 1, 2017
E&E News: "95 Scholars Urge Trump to Revamp 'Misguided' 2-for-1 Order," May 24, 2017
PVBuzzMedia: "Yale & Duke University Study Maps the Way Toward 'Tipping Points' in Solar Adoption," May 10, 2017
Journal Gazette: "Scientists Bolster Fuel Standards as Safety Issue," May 4, 2017
Washington Post: "Scientists Just Debunked One of the Biggest Arguments Against Fuel Economy Standards for Cars," May 3, 2017
Journalist's Resource: "Fuel-efficient Cars May Actually Be Safer Than Gas Guzzlers," May 3, 2017
WNPR: "In Millstone Brinkmanship, Is a Carbon Tax The More Elegant Solution? May 2, 2017
Yale News: "Scientists Brace for Potential Federal Research Cuts, Regulatory Shifts," Apr 19, 2017
Yale News: "National Guidebook Maps the Way Toward 'Tipping Points' in Solar Adoption," Apr 18, 2017
The Register-Guard: "Green-aware Investors can do Good - and Well," Apr 16, 2017
Yale News: "Yale Economist: Trump Order Unlikely to Alter Tightening US Coal Market," Mar 29, 2017
ClimateWire: "Trump to Roll Back Clean Power Plan Tomorrow at EPA," Mar 27, 2017
Philadelphia Tribune: "Energy Star Program Faces Funding Cut," Mar 20, 2017
Climate Central: "Climate-Friendly Energy Star Program Could be Cut," Mar 9, 2017
Yale Daily News: "Energy Studies Sees Higher Interest," Feb 9, 2017
180 Degrees (interview): "Oil Exports in Light of the New Energy Technologies," Feb 3, 2017
The Real News Network (interview): "Declining Cost of Renewables Will Challenge Trump's Promise to Bring Back Jobs Through Coal," Jan 26, 2017
The Conversation.com: "Will Trump Negotiate a Better Coal Deal for Taxpayers?" Jan 22, 2017
Climate Central: "Trump White House Distorts Wages Figure on First Day," Jan 20, 2017
Yale Alumni Magazine: "Widening Access to Residential Solar," Jan/Feb 2017
Bloomberg Businessweek: "How Climate Rules Might Fade Away," Dec 15, 2016
Politifact: "Make Buildings More Energy Efficient," Dec 9, 2016
Yale News: "Ripe for Reform: Economists Lay Out Flaws in Federal Coal Leasing Program," Dec 2, 2016
Yale Daily News: "Yale Program to Bring Solar Power to Low-Income Households," Nov 9, 2016
Muskogee Phoenix: "Solar Power Use Could Benefit Homeowners," Nov 4, 2016
Yale Climate Connections: Audio Interview on "Integrating Renewables," Oct 26, 2016
Yale News: "Yale-Led Project to Widen Access to Household Solar Receives Federal Grant," Oct 25, 2016
WalletHub.com: "Most and Least Energy-Efficient States," Oct 21, 2016
New York Times: "How Lowering Crime Could Contribute to Global Warming," Aug 3, 2016
ClimateWire: "Wyo.'s Gov. Mead Blasts Federal Coal Leasing Review," Aug 1, 2016
New York Times: "How Renewable Energy is Blowing Climate Change Efforts Off Course," Jul 19, 2016
Washington Post: "Obama Admin Changing Coal Royalty Program to Boost Revenue," Jun 30, 2016
ClimateWire: "White House: Raising Federal Royalties Will Save GHGs," Jun 23, 2016
InsideClimate News: "White House: Raising Coal Royalties a Boon for Taxpayers, and for the Climate," Jun 23, 2016
Argus Media: "US Coal Lease Changes Could Greatly Boost Revenue: CEA," Jun 22, 2016
Reuters: "White House Economists Say U.S. Coal Program Costing Taxpayers," Jun 22, 2016

Washington Post: "Obama's Advisers Just Dismantled a Key Myth About the Future of Clean Energy," Jun 21, 2016
TheLowDownBlog: "Costs are Going Down but Solar Power Spreads Because it is Contagious," May 18, 2016
Builder Magazine: "Rooftop Solar Power is Contagious," May 5, 2016
Vox.com (Brad Plumer): "Solar Power is Contagious. These Maps Show How it Spreads," May 4, 2016
SolarCity Blog: "The Remarkable Reason That Solar is Going Viral in these 10 Cities," May 4, 2016
Wall Street Journal: "Long-term Costs of Cutting Emissions Grow Hazy," April 24, 2016
Yale FES News: "Funding Shortfalls Hamper Knowledge of Social, Economic Climate Impacts," April 21, 2016
Greenwire: "Study Probes Why Some Installations Are Much Cheaper Than Others," Jan 20, 2016
Huffington Post: "What Can We Learn From the 'Dumbest Town in the U.S.'," Jan 5, 2016
Salt Lake Tribune: "What Economists Don't Get About Climate Change," Nov 4, 2015
Bloomberg View: "What Economists Don't Get About Climate Change," Nov 3, 2015
Vox.com (David Roberts): "The 'Uncertainty Loop' Haunting Our Climate Models," Oct 23, 2015
Yale News: "Yale's Participation in Unique Solar Program Highlights Earth Week 2015," Apr 17, 2015
Huffington Post: "'Keeping Up With the Jones' Gives Solar Revolution a Boost," Jan 30, 2015
Hartford Courant: "CT Creeps Toward Electric Grid 2.0," Dec 29, 2014
Yale Daily News: "SOM Hosts Low-Carbon Investment Competition," Nov 17, 2014
KLIV San Jose with Barry Cinnamon: "What Influences People to Install Solar?" Nov 16, 2014
Gigaom.com: "SunPower Wants to be the Dell of Solar," Nov 13, 2014
PrettyVisible Blog: "Solar is Contagious," Nov 12, 2014
Yale Climate & Energy Institute Penumbra Blog: "Divestment Enters the Mainstream?" Nov 10, 2014
UtilityDive.com: "How Solar Power Spreads Among Neighbors 'Like a Contagion'," Nov 3, 2014
Boston Globe: "How to Get a Country to Switch to Coal: Changing to Renewables Will be Hard But Not Impossible, if Our Last Energy Transition is Any Guide," Nov 2, 2014
Care2.com: "You'll Be Surprised Which Contagious Thing is Spreading Now," Oct 26, 2014
PVBuzz.com: "Solar Power Growth in U.S. Neighbourhoods Could be Contagious (Study)," Oct 25, 2014
Vox.com (Brad Plumer): "Solar Power is Contagious: Installing Panels Often Means Your Neighbors Will Too," Oct 24, 2014
New York Times Dot Earth: "Another Round on Energy Rebound," Oct 24, 2014
Washington Post Wonkblog: "Why Do People Put Solar on Their Roofs? Because Other People Put Solar on Their Roofs," Oct 23, 2014
New York Times Dot Earth: "Is There Room for Agreement on the Merits and Limits of Efficient Lighting?" Oct 21, 2014
New York Times: "Letter to the Editor on 'The Problem with Energy Efficiency'," Oct 18, 2014
Sunlight Solar Blog: "Yale University to Study Solarize," Sep 29, 2014
WalletHub.com: "Most and Least Energy Expensive States," Jul 23, 2014
Yale Daily News: "Forum Engages Climate Scientists and Economists," Nov 22, 2013
Washington Square News: "Stern, Yale Professors Team Up To Research Solar Energy," Oct 1, 2013
Connecticut Public Radio (WNPR): "A New Gas Tax, But What's it Paying For?" Jul 1, 2013
Yale Scientific Magazine: "Yale Professor Discusses the Economics of Conservation," May 11, 2013
Yale Scientific Magazine: "Solar Energy: Sink or Spread-Professor Gillingham's Study on the Scalability of Solar Energy," April 5, 2013
Yale Daily News: "Green Expectations: Yale's Energy Investments Struggle," Mar 26, 2013
Connecticut Public Radio (WNPR): "Yale Gets Award to Help Grow Solar Energy," Feb 20, 2013
New Haven Register: "Yale Receives $1.9 million Solar Grant," Jan 30, 2013
Swiss National Radio: "Rebound Effect," Jan 25, 2013
The Naked Scientists, Science News: "Energy Efficiency on the Rebound," Jan 24, 2013
Revkin.net: "Rebound is Real, But Limited," Jan 24, 2013

Scaling Green:"New Study: Energy Efficiency Negative 'Rebound Effect' Greatly Exaggerated," Jan 24, 2013
R&D Magazine: "The 'Rebound' Effect of Energy-Efficient Cars Overplayed," Jan 24, 2013
Huffington Post: "Nature: The Rebound Effect is Overplayed," Jan 24, 2013
Grist (David Roberts): "Why Are Greens So Defensive About the Rebound Effect," Jan 24, 2013
Phys.org: "Researchers Argue Energy Policy Rebound Effect is Overestimated," Jan 24, 2013
Arstechnica: "How Badly Does the Rebound Effect Undercut Energy Efficiency?" Jan 24, 2013
Sierra Daily: "Energy Efficiency? Why Bother?" Jan 23, 2013
Central Valley Business Times: " 'Rebound Effect' Has Little Bounce," Jan 23, 2013
Scientific American: "Does Increased Energy-Efficiency Just Spark Us to Use More?" Jan 23, 2013
Yahoo News: "Economist: Rebound Effect of Energy-Efficient Cars is Overplayed," Jan 23, 2013
New York Times: "Solar Industry Borrows a Page, and a Party, from Tupperware," Dec 1, 2012
AOL Energy: "The Psychology of Small-Scale Solar," Nov 19, 2012
Yale Daily News: "Sandy Link to Climate Change Questioned," Nov 9, 2012
ClimateWire: "Is Renewable Energy Contagious: Research Shows a 'Peer Effect'," Nov 5, 2012
Huffington Post: "Solar Panel Installations More Likely In Homes With Energy Efficient Neighbors," Oct 23, 2012
Environmental News Network: "Solar Power Adoption is Contagious," Oct 22, 2012
R&D Magazine: "Study: Solar Power is Contagious," Oct 19, 2012
EarthTechling.com: "The Solar Power Bug: Has Your Neighborhood Caught it?" Oct 19, 2012
Solar Industry Magazine: "New Study Shows Solar Installations Are Contagious in Neighborhoods," Oct 19, 2012
CleanEnergyAuthority.com: "Go Solar, it's the Neighborly Thing to Do," Oct 19, 2012
India Talkies: "Use of Solar Panels Popularised by Example," Oct 19, 2012
Alternative Energy Blog: "Solar Power Tends to Go Viral, New Report Suggests," Oct 19, 2012
Albuquerque Express: "Use of Solar Panels Popularized by Example," Oct 19, 2012
Wired UK: "Enthusiasm for Solar Panels is Contagious," Oct 19, 2012
kcet.com: "'C'mon, Everyone is Doing it': Peer Pressure Sells Solar, Says Study," Oct 18, 2012
CleanTechnica.com: "If Your Neighbor Has Solar Panels, You're More Likely to Go Solar," Oct 18, 2012
Wall Street Journal *SmartMoney*: "For Appliances, Does Energy Efficiency Sell?" Oct 16, 2012
CleanTechnica Blog: "Prius Rebound Effect Wrong," Mar 28, 2012
Climate Progress Blog by Joe Romm: "Debunking the Fallacy of the Prius Rebound Effect," Mar 26, 2012
CO_2 Scorecard: "Non-Conundrum of the Prius Fallacy," Mar 26, 2012
Yale Daily News: "Nuclear's Back with New Clarity," Feb 10, 2012
Forbes: "Keeping Up With the Greens: Neighborhood Solar is Contagious," Dec 9, 2011
Washington Post: "Solar Power is Contagious – But Not Quite Virulent," Dec 5, 2011
Business Times: "Cutting Green Path Via Behavioural Economics," Nov 21, 2011
The Straits Times (Singapore): "To Save the Earth, Know Human Nature," Nov 20, 2011
Yale Daily News: "City Wins Transportation Grant," Oct 20, 2011
Connecticut Public Radio (WNPR): "Where we Live: Future of Natural Gas" Aug 8, 2011
The David Sirota Show AM 760: "Solar Power is Contagious," Apr 25, 2011
Wired: "Solar Panels are Contagious," Apr 12, 2011
Energy Matters: "Australia's Home Solar Power Revolution and the Viral Effect," Apr 6, 2012
Grist: "Solar Power is Contagious," Apr 5, 2011
Grist: "Making Buildings More Efficient: Looking Beyond Price," Oct 23, 2009
Wall Street Journal *The Numbers Guy* Blog: "The Rebound Effect," May 26, 2009

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