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Regulating Vehicle Emissions: California's Embattled Exception

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I. INTRODUCTION

Electric vehicles (EV) are not a new or novel concept. Due to recent developments in EV technology, companies around the globe are transitioning production to these more environmentally friendly vehicle options. As consumers purchase EVs, various states and the federal government stand opposed concerning how to effectively balance the requirements of existing environmental legislation with the express and inherent rights of the sovereign states when regulating emissions. This article analyzes the existing environmental legislation impacting EV regulations, specifically focusing on California, the Environmental Protection Agency (EPA), and the National Highway Traffic Safety Agency (NHTSA). Because Congress established a unique preemption provision for California under the Clean Air Act (CAA) and provided opportunities for other states to follow California's standard, a review of inherent states' rights and legislative intent will establish that California and the other states following California's exception are adequately positioned to regulate vehicle emissions standards.

Part II of this article introduces the technology and current legal issues facing California's regulations of vehicle emissions. Part III focuses on laws enabling California to establish a national emissions standard, as well as the importance of a national, unified program. Part IV addresses the federal regulatory programs overseeing vehicle emissions and fuel

economy standards, and how they influenced a recent joint agency rule impacting California's efforts to regulate emissions. Part V asserts that individualized state emissions standards are the most public-health-conscious, cost-effective, and environmentally friendly options available to the government to reduce greenhouse gas (GHG) emissions. This article concludes that states, like California, should have a more pronounced national role in establishing emissions regulations in conjunction with the federal agencies.

II. GROWTH AND IMPACTS OF THE ELECTRIC VEHICLE MOVEMENT

A. A Charged History

Motor vehicles have come a long way since Fred Flintstone used his feet to ferry Wilma and Pebbles around Bedrock.[1] While humanity is certainly further along than the Flintstone's era of technology in powering cars, we are equally as far from the flying car technology seen in another classic Hanna-Barbera show: *The Jetsons*.[2] No matter how far away cars may seem to be from replicating George Jetson's flights above Orbit City, car companies around the world are taking notice of the growing EV industry and are innovating to join the fray.[3] In the next five years, auto-manufacturers, such as Audi, BMW, Porsche, Nissan, Ford, and Volvo, plan to stake their claim for the market share[4] of commercial EVs currently held by Tesla.[5] The wave of new and heightened investments in technology is due to the efforts of even larger companies like IKEA and DHL forming the "EV100" coalition—sending clear signals to auto-manufacturers that EVs will soon replace the gas-guzzling trucks of

1. *The Flintstones,* FANDOM, https://hanna-barbera.fandom.com/wiki/The_Flintstones [https://perma.cc/V2TF-XF6N] (last visited Oct. 7, 2022).

2. *The Jetsons,* FANDOM, https://hanna-barbera.fandom.com/wiki/The_Jetsons [https://perma.cc/737R-TGKU] (last visited Oct. 22, 2022).

3. *See id.*; *Every Electric Vehicle That's Expected in the Next Five Years*, CAR & DRIVER (Jan. 26, 2022), https://www.caranddriver.com/news/g29994375/future-electric-cars-trucks/ [https://perma.cc/P936-ZY9F].

4. As of February 2021, Tesla commanded almost 80% of the EV market. Tesla's share of the market was expected to decline after the federal tax credit for electric vehicles was eliminated, but Tesla's lead over competitors remains strong. Fred Lambert, *Tesla Owns 79% Of the Electric Car Market in the US, and That Needs to Change,* ELECTREK (Feb. 16, 2021, 1:07 PM), https://electrek.co/2021/02/16/tesla-owns-electric-car-market-us/ [https://perma.cc/75CF-N6XC].

5. *See id.* Further, Cadillac, Chevrolet, Genesis, Hyundai, Jaguar, Lexus, Lotus, Mercedes, Rivian, Harley Davidson, Subaru, Toyota, and Volkswagen are all planning on similar vehicle line ups over the next five years.

shipping fleets.[6] The dramatically increased interest in and emphasis on developing more than just individually owned EVs illustrates the larger market's commitment to making *all* vehicles more environmentally friendly. The EV100 coalition launched its campaign across Europe and the United States to spur innovation towards EVs and away from gas and diesel-powered transportation.[7] Globally, emissions from gas and diesel-powered vehicles generate almost a quarter of energy-related GHG emissions, significantly impacting countries like the United States.[8] While companies promise to electrify significant portions of their fleets (e.g., General Electric (GE) pledged to electrify half of its 30,000 vehicles), navigating the EV industry is not as easy as potential EV drivers would expect.[9]

Tesla EVs have made Elon Musk a household name throughout the United States, but EVs are not unique to the 21st century.[10] The first electric vehicles were developed in the early 1800s in Europe and shared similarities in appearance and function to modern day street cars.[11] In the

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6. The "EV100" coalition is significant because it is the first joint venture of major corporations creating initiatives to increase the supportive infrastructure necessary to charge electric vehicles. EV100 aims to increase fleets of commercial vehicles and works with nations across Europe and the United States to implement regulations supporting its mission. Peter Fairley, *10 Giant Companies Commit to Electric Vehicles, Sending Auto Industry a Message*, INSIDE CLIMATE NEWS (Sept. 19, 2017), https://insideclimatenews.org/news/19092017/electric-cars-ev100-coalition-charging-fleet-ikea-dhl/ [https://perma.cc/9X84-FAXC].

7. *See id.*

8. *See id.* Germany's Deutsche Post DHL Group purchased the EV startup, StreetScooter, in order to build its own electric delivery vans. Companies like IKEA and PG&E have increased production of charging stations across several continents in order to facilitate the transition to their EV fleets. There are over 250 million registered vehicles in the United States alone, indicating that where vehicles account for significant emissions globally, the impact of higher vehicle numbers and populations increase the impacts of emissions. *Number of Motor Vehicles Registered in the United States from 1990 to 2019*, STATISTA, https://www.statista.com/statistics/183505/number-of-vehicles-in-the-united-states-since-1990/ [https://perma.cc/UW9U-KUDQ] (last visited Oct. 7, 2022); *Sources of Greenhouse Gas Emissions*, EPA, https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions [https://perma.cc/PCF2-JTY8] (last updated Aug. 5, 2022).

9. *Id.*

10. Elon Musk is the CEO and founder of Tesla. BRIGHT SIDE, *Electric vs. Gas Car | How Electric Cars Work*, YOUTUBE (July 3, 2019), https://www.youtube.com/watch?v=5yY8kmLugvk [https://perma.cc/G8HR-S5MT].

11. *Id.* In 1828, Ányos Jedlik, a Hungarian engineer, invented the first electric-powered motor and used it to power an early car model. Later, in 1834,

1800s, primary cell batteries—used to store the early EV's electric fuel—were inefficient and oversized; batteries capable of sustaining the required electric load to propel the vehicle did not fit inside the vehicle's frame.[12] By the mid-19th century, the invention of the lead acid battery solved this problem and eliminated the sizing issue associated with battery storage.[13] By the turn of the 20th century, EVs hit the streets of the United States, appearing to be *the* new mode of transportation.[14] By 1900, one third of all global passenger cars were electric, and infrastructure improved as necessary to support wagon services.[15] Unfortunately for EV enthusiasts, this fixation was short lived.

In the early 1900s, demand for EVs sharply declined after the gas powered car had its own technological revolution.[16] After the invention of the electric starter and muffler, demand for gas powered vehicles rose exponentially due to the gas car's newer, quieter, more affordable, and easier to start combustion engine.[17] Subsequently, people like Henry Ford began producing millions of their faster, less expensive, and easier to operate gas powered vehicles in places like Detroit, Michigan, resulting in reduced interest in the EV.[18]

B. Renewed Interest in Electricity

The comeback for EVs began in the 1980s upon General Motors' (GM's) then-CEO Roger Smith taking an interest in the development of a

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Thomas Davenport followed suit and delivered a similar product to power vehicles like our modern-day street cars. However, both engineers ran into the same issue of failing to store the excess generated electricity necessary to propel the vehicles over long distances.

12. *Id.*

13. *Id.* Gaston Plante's invention of the lead acid battery allowed vehicles to travel further and was smaller in size than the first design concepts.

14. *Id.* The first electric powered vehicles were used in cities to transport individuals around town at speeds upwards of 14mph.

15. *Id.*

16. *Id.*

17. *Id.* One of the main reasons fossil fuel burning cars had not grabbed the public's attention was the intolerable noise of the combustion engine and the steep price point. Between the newer engine design and muffler, the noise which previously deterred purchasers was fixed by industry. The Model T cost $650 compared to the $1,750 price tag of an electric vehicle at the time.

18. *Company Timeline,* FORD, https://corporate.ford.com/about/history/company-timeline.html [https://perma.cc/6SNB-W2B6] (last visited Oct. 7, 2022).

solar-powered, electric race car.[19] GM's first ever EV prototype went from 0 to 60 mph faster than its main competitor–the Nissan 300ZX; this prototype was described by *Popular Science Magazine* as "possibly the best handling and performing small car that GM has ever turned out."[20] Since Roger Smith's modest interest in EVs, investment and research into EVs skyrocketed.[21] By 2019, global EV sales reached 2.1 million vehicles and accounted for 2.6% of total global vehicle sales—a 40% increase from the prior year.[22] The increase in EV demand was not exclusive to the United States or to companies like Tesla.[23] In 2020, China and Europe led the way in global EV sales.[24] Between the U.S. and China's tax incentive programs, subsidy purchases, and innovations geared toward better electric components, car companies entering the EV industry no longer faced obstacles in production, and buyers began lining up to purchase. However, like the problems developers faced with mid-19th century battery technology, it was not until a second wave of battery technology improvements during the early 2000s that a renewed interest in EVs took off. Over the last ten years, battery density[25] technology has improved

19. Daniel Sperling, *Gearing Up for Electric Cars*, 11 ISSUES SCI. TECHNOL 33 (1994).

20. *Id.* at 35. GM initially invested $2 million to develop the Sunraycer for the purpose of winning the World Solar Challenge race. *Roger Smith (Executive)*, WIKIWAND, https://www.wikiwand.com/en/Roger_Smith_(executive)#/Solar_Challenge [https://perma.cc/H8VE-HW43] (last visited Oct. 7, 2022).

21. *Global EV Outlook 2020: Entering the Decade of Electric Drive?*, IEA (June 2020), https://www.iea.org/reports/global-ev-outlook-2020 [https://perma.cc/8B64-7VS6].

22. *Id.*

23. While major car companies are beginning to develop new electric vehicles to compete with Tesla, in the last five years, major brands have been unable to compete with Tesla's Model 3 because larger corporations continued to focus on gas powered vehicles. Neil Winton, *Here's the Competition for Tesla's Model 3*, FORBES (Mar. 31, 2016, 9:16 AM), https://www.forbes.com/sites/neilwinton/2016/03/31/teslas-model-3-will-join-small-group-of-pioneering-battery-powered-cars/?sh=798a72253351 [https://perma.cc/Q4UW-FLBJ].

24. Over 1.3 million electric vehicles were sold in China in 2020, representing 41% of global EV sales following Europe's 42%. The United States' EV sales represented only 2.4% in 2020. *China's Electric Vehicle Sales 2021*, CANALYS (Feb. 22, 2021), https://www.canalys.com/newsroom/china-electric-vehicles-2021 [https://perma.cc/BM5P-3CTC].

25. Battery density is a measure of how much energy a battery can hold. The higher the density, the longer the battery will last.

from 20% to 100%, while battery costs have decreased by 85%.[26] Weighted battery pack prices dropped from $1,100 per kilowatt-hour in 2010 to $156 per kilowatt-hour in 2019.[27] Additionally, vehicles can now travel upwards of 320-miles on a single charge.[28] As a result of these technological improvements to the performance and price of batteries, EVs are capable of competing directly with successors of its early 20th century rivals: the gas-powered engine.

C. The Induction Motor

The induction motor represents the most significant piece of technology that helped propel the EV's popularity.[29] In order to work, an EV requires the electric current generated by the induction motor to flow through the vehicle's components to power and propel the EV forward.[30] The electricity in an induction motor is generated through the rotation of a three-phase alternator positioned around a collection of conduction bars, which produces a magnetic field.[31] The resulting magnetic field creates a charge that generates the electricity necessary to power the vehicle. While this technology is certainly not new, using it to power vehicles, combined with a modern and improved battery system, facilitated the production of new electric vehicles capable of matching traditional cars in size, speed,

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26. *Global EV Outlook 2020: Entering the Decade of Electric Drive?*, *supra* note 21.

27. *Id.*

28. J.L. Seto, *Does the Tesla Model 3 Actually Make It to 300 Miles on 1 Charge?*, MOTORBISCUIT (Jul. 24, 2020), https://www.motorbiscuit.com/does-the-tesla-model-3-actually-make-it-to-300-miles-on-1-charge/ [https://perma.cc/JG2M-LGHL].

29. Induction motors work when electromagnets are arranged and rotated around the outside of a series of coils. The power is sent to the outer magnets. These magnets rotate to create a magnetic field from the coils and induce an electric current to power the car. Chris Woodford, *Induction Motors*, EXPLAIN THAT STUFF!, https://www.explainthatstuff.com/induction-motors.html [https://perma.cc/TY93-4PWG] (last updated June 28, 2021).

30. Lesics, *How Does an Electric Car Work? | Tesla Model S*, YOUTUBE (May 30, 2017), https://www.youtube.com/watch?v=3SAxXUIre28 [https://perma.cc/HGE6-EYTX]. In an induction motor, motor speed depends on the frequency of the AC power supply, which alters the drive wheel speed, making the handling more reliable. *Id.* Motor speeds can range from 0-18,000rpm. *Id.* Electric motors are superior when compared to ICEs, which only produce usable torque or rotational force; the power within certain speed ranges generally top out around 7,000 rpm. *Id.*

31. *Id.*

aesthetics, and performance.[32] More importantly, for purposes of environmental compliance, the induction motor produces no direct emissions—raising the interesting question of which environmental law(s) regulates the industry.

D. Improving EV Technology and Decreasing Consumer Costs

After resolving the EV's power issues, engineers needed a way to store the vehicle's energy and make battery recharge more user-friendly, thus more marketable to consumers. Unlike *Saturday Night Live's* EV sketch, where Julia Dreyfus attempts to replace her EV's battery with thousands of AA-batteries, modern EV battery systems are significantly simpler and more robust.[33] Vehicle manufacturers like Tesla built their EVs around the battery issue. Tesla turned to engineers in designing their EVs with 16 detachable battery packs lining the floor of the vehicle.[34] Engineers chose to place the batteries on the vehicle floor to reduce thermal hotspots and prevent the novel batteries from overheating, swelling, or catching fire, which resulted from extended use.[35] These improvements to the battery made EVs more practical and sustainable, which led to an increase in demand across the United States.[36]

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32. Tibi Puiu, *Who Invented the Induction Motor*, ZME SCI. (Feb. 24, 2020), https://www.zmescience.com/science/history-science/history-induction-motor/ [https://perma.cc/4UCH-WF49].

33. *New Mercedes*, NBC: SATURDAY NIGHT LIVE (April 16, 2016), https://www.nbc.com/saturday-night-live/video/new-mercedes/3021121 [https://perma.cc/69QC-6F36].

34. Lesics, *supra* note 30.

35. Andrew Evers & Lora Kolodny, *Electric Vehicle Fires Are Rare, But Hard to Fight-Here's Why,* CNBC (Jan. 29, 2022, 8:00 AM), https://www.cnbc.com/2022/01/29/electric-vehicle-fires-are-rare-but-hard-to-fight-heres-why.html [https://perma.cc/5YVN-D7RM]. Battery packs positioned on the floor of a vehicle guarantee that cooling liquid can pass through all 7,000 battery cells, preventing the batteries from overheating. *Id.*

36. Between 2017 and 2018, EV demand rose 65%, holding steady through 2019 until the Covid-19 pandemic hit. However, global passenger sales are expected to see EVs hit 10% of total sales by 2025 and 58% by 2040. *See* Ariel Cohen, *Plugging Into the Future: The Electric Vehicle Market Outlook,* FORBES (Oct. 26, 2020, 8:22 AM), https://www.forbes.com/sites/arielcohen/2020/10/26/plugging-into-the-future-the-electric-vehicle-market-outlook/?sh=2d51bf3c9812 [https://perma.cc/8MCG-JYJN].

EV demand also increased based on a function absent in traditional vehicles: regenerative braking.[37] A conventional car's braking system causes the accumulation of significant heat between the brake pads and wheels, which wears down the car's components.[38] More importantly, and unlike EVs, the energy created by the friction between the wheels and brake pads in a conventional car is lost and subsequently wasted.[39] In contrast, EV's regenerative braking allows the recovery of some of that energy, while also allowing the battery to recharge during each drive, increasing the vehicle's efficiency over its conventional gas competitors.[40]

EVs recharge the vehicle's batteries during braking by reversing the direction of the induction motor. When an EV brakes, a current is created by rotating the three-phase alternator in the opposite direction (from forward travel) over the coils creating a charge that travels back to the batteries.[41] EV car makers capitalized on the reverse rotation created by regenerative braking by making EVs capable of harvesting the back electromotive force (EMF)[42] through braking.[43] While regenerative braking is extraordinary and helps maximize the vehicle's energy, it is not 100% efficient.[44] EVs cannot capture all of the energy created by braking because charging in the opposite direction is slower and fails to capture energy converted to heat (i.e., heat loss) in the process.[45] Even though braking typically generates a fraction of the energy required to power EVs,

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37. KYLE.ENGINEERS, *How Does Regenerative Braking Work? - Electric Car Breaking Explained,* YOUTUBE (Dec. 12, 2016), https://www.youtube.com/watch?v=0b2i5ufN7k0 [https://perma.cc/7QYJ-3K3M].

38. *Id.*

39. *Id.*

40. Regenerative braking can be found in almost all electric vehicles on the market today. Jordan Almond, *The Truth About Regenerative Braking*, MOTORBISCUIT (Apr. 10, 2020), https://www.motorbiscuit.com/the-truth-about-regenerative-braking/ [https://perma.cc/MDE3-ZN8M].

41. KYLE.ENGINEERS, *supra* note 37.

42. *Id.* Back EMF is related to the electric generation within an electric vehicle's motor. *Id.* When a vehicle brakes, it produces a force back on the magnets of the induction motor, sending the voltage in the opposite direction. *Id.* The same magnets and coils used for the induction motor produce a current that is pushed to the batteries. *Id.*

43. KYLE.ENGINEERS, *supra* note 37. However efficient regenerative braking is, many electric vehicles still have disc brakes because induction motors are not large enough to store the excess energy generated from decelerating at higher speeds. *Id.* There is simply not enough motor power to dissipate the energy generated by braking like traditional brake pads can handle. *Id.*

44. *Id.*

45. *Id.*

Tesla drivers in Colorado Springs reported that driving down the 19-mile toll road from the top of Pikes Peak (14,115 feet) to the park's entrance (7,400 feet below) recharged their vehicles enough to drive 25 miles.[46] With regenerative braking able to recapture between 16–70% of the vehicle's energy, the recharging cost to consumers drops, as does the potential draw on the electric grid, reducing some of the already low impacts on the environment from EVs.[47]

EVs are a cost-saving alternative for drivers, providing relief from the fluctuating, unpredictable fuel costs of traditional gas engines. At-home charging has improved over the years, making the transition to EVs more attractive when compared to waiting in long lines at a gas station. As of 2019, there were 7.3 million EV chargers worldwide—6.5 million of which were privately owned, light-duty charging stations at homes and workplaces.[48] The Department of Energy estimates that charging a 100-mile range vehicle costs the same as operating a home's central air conditioner for six hours.[49] EV users pay around $5 per charge, for up to 150 miles of charge.[50] Put another way, GM estimates that the annual bill for charging its Chevy Volt consuming 2,520 kWh to be approximately $350, which costs less than running a home's water heater for a year.[51] Compared to gas prices, an EV's energy cost per mile is roughly 60% less than gasoline vehicles, saving consumers upwards of $1,500 on annual

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46. *See* Model S, *Forum*, TESLA (Aug. 2017), https://teslamotorsclub.com/tmc/forums/model-s.73/ [https://perma.cc/JT8A-S3C9].

47. *See* K.T. Chau, *Alternative Fuels and Advanced Vehicle Technologies for Improved Environmental Performance,* SCIENCEDIRECT (2014), https://www.sciencedirect.com/topics/engineering/regenerative-braking [https://perma.cc/UD8G-DEBG].

48. *Global EV Outlook 2020: Entering the Decade of Electric Drive?*, *supra* note 21. This number includes both private chargers and charging stations.

49. A Level 1 electric vehicle supply equipment ("EVSE") 120-volt (V) AC plug adds about 2 to 5 miles of range to a vehicle for every hour of charging time, based on the national average of 12.6 cent/kWh. *See Electric Vehicle Charging At Work, Understanding Workplace PEV Charging Behavior to Inform Pricing Policy and Investment Decisions,* LUSKIN CENTER, https://innovation.luskin.ucla.edu/wp-content/uploads/2019/03/EV_Charging_at_Work.pdf [https://perma.cc/YY2J-XK3E] (last visited Nov. 16, 2022).

50. Larger charging stations or battery loads can increase these costs upwards of $15. Tim Levin, *How Much You Should Expect to Pay to Charge an Electric Car*, INSIDER (Apr. 1, 2022, 1:17 PM), https://finance.yahoo.com/news/much-expect-pay-charge-electric-181723539.html [https://perma.cc/UCV7-BQYA].

51. *EV Charging Systems*, AM. ARRAY SOLAR & ROOFING, https://www.americanarraysolar.com/solar/ev-charging-installation/ [https://perma.cc/H6T3-UNUT] (last visited Oct. 7, 2022)

fuel costs.[52] While consumers enjoy the lower EV operating costs, states and federal agencies face a more challenging issue as to which regulations and statutes should control these vehicles, and how to navigate the traditional power dynamics between the two sovereigns.

III. THE EMISSIONS AND FUEL ECONOMY LAWS IMPACTING STATES

A. The Clean Air Act

In 1959, California became the first jurisdiction in the United States to address the increased air pollution caused by emissions when it enacted laws instituting air quality standards.[53] Shortly after California established the first state-wide program addressing air quality, Congress passed the Nation's first federal air pollution law under the Clean Air Act (CAA) of 1963.[54] Because California was the first state to pass legislation regulating air quality standards, Congress carved a waiver for California (California Exception) under the CAA, providing the state with a unique opportunity to regulate emissions separately from the EPA's standards.[55] Congress directed the EPA to waive the CAA's preemption clause as long as California submitted its proposed regulations to the EPA and met three conditions:[56] (1) California's determination to implement a separate standard was not arbitrary or capricious; (2) California justifiably requires separate standards to meet the compelling and extraordinary conditions in its state; and (3) California's standards and accompanying enforcement provisions coincided with Section 202(o) of the CAA.[57] By its language, the CAA leaves little discretion for an EPA Administrator because Congress directed that the EPA Administrator "shall" grant California's

52. Mike Winters, *Here's Whether It's Actually Cheaper to Switch to an Electric Vehicle or Not—and How the Costs Break Down*, https://www.cnbc.com/2021/12/29/electric-vehicles-are-becoming-more-affordable-amid-spiking-gas-prices.html [https://perma.cc/4P7V-2PLY] (last updated Dec. 29, 2021, 4:32 PM); *Advanced Vehicle Testing Activity,* IDAHO NAT'L LAB'y, https://avt.inl.gov/sites/default/files/pdf/fsev/costs.pdf [https://perma.cc/N2F7-VFCN] (last visited Nov. 25, 2022).

53. *See* 1959 Cal. Stat. Ch. 200, § 1. Oregon was the first state to create an agency with regulatory power over clean air standards in 1952.

54. 42 U.S.C. § 1857–1857c-9; Clean Air Act of 1963, Pub. L. No. 88-206, 77 Stat. 392.

55. 42 U.S.C. §§ 7521, 7543(a)-(b).

56. *Id.* § 7543(a)-(b).

57. *Id.* § 7543(b)(1)(a)-(c).

waiver once it meets the listed conditions.[58] Congress's mandate established a relatively low bar for California. So long as California articulated a meaningful purpose (e.g., health concerns or environmental impacts), the exception to the EPA's national program would be granted.

Congress understood that air pollution transcends state boundaries and sought to address the pollution problem through the CAA's unified, national program. The California Exception subsequently created a wrinkle in the courts because it required the justice system to evaluate the rights of two sovereigns—the United States and California—and whether the prevailing laws conflicted. Congress does not normally make the application of its federal legislation state law-dependent, but the California Exception provides a clear exclusion to the typical applications of field,[59] conflict,[60] and obstacle[61] preemption.[62] What makes the California Exception so significant is not only that it allows California to adopt individualized standards, but that it allows other states to adopt California's standard, *seemingly* creating an alternative national program from California's law.[63]

A key part of the CAA is the EPA's ability to influence and regulate all GHGs, including both stationary and mobile sources. Under section 108 of the CAA, Congress empowered the EPA to establish national ambient air quality standards (NAAQs) for all pollutants.[64] NAAQs are the minimum standards that the EPA sets to combat the increase in GHGs

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58. *Id.*; The use of "shall" is significant because it is distinct from language like "may," as Justice Story analyzed in Martin v. Hunter's Lessee, 14 U.S. 304 (1816). Justice Story opined that language like "shall" created a duty requiring the conduct articulated by the Congress.

59. *See* Sears v. Stiffel*,* 376 U.S. 225 (1964) (noting that when Congress intends federal law to 'occupy the field,' state law in that area is preempted).

60. *See* Crosby v. Nat'l Foreign Trade Council, 530 U.S. 363 (2000). (explaining that the State's Myanmar trade law creates obstacle preemption because it undermines the purpose of Congress' objectives and natural effect that the provisions of Presidential control has over economic sanctions).

61. *See* Eng. v. Gen. Elec. Co., 496 U.S. 72 (1990) (explaining how "purpose and objectives" of a federal statute are unexpressed but courts follow and acknowledge the objectives of the statute and the obstacles state laws create).

62. *See* Jerome v. U.S., 318 U.S. 101 (1943).

63. 42 U.S.C. § 7543(e)(2)(B) ("Any State other than California, which has plan provisions approved under part D of subchapter I, may adopt and enforce, after notice to the Administrator, for any period, standards relating to control of emissions from nonroad vehicles or engines.").

64. Clean Air Amendments of 1970, Pub. L. No. 91-604, §§ 6(a), 15(c)(2), 84 Stat. 1676, 1690, 1713; *see* Motor Vehicle Air Pollution Control Act of 1965, Pub. L. No. 89-272, § 101, 79 Stat. 992, 992-93 ¶49.

and other volatile airborne compounds throughout the United States. In working with the EPA, states must create plans analyzing how mobile and stationary sources of GHGs contribute to NAAQs. Section 110 of the CAA directs the states to draft and submit state implantation plans (SIPs) to the EPA in order to meet the NAAQs. While there has been minimal pushback to the EPA's reach concerning these regulations, some groups take issue with the EPA's delegated authority and whether the agency can issue regulations controlling vehicle emissions.[65] However, the Supreme Court concluded that the EPA has the authority to set standards extending to all GHGs, including vehicle emissions, confirming the EPA's emerging role in regulating cars and trucks.[66]

In 1994, Congress amended the CAA to deliberately address the environmental impacts of vehicle emissions. The amendment granted the EPA with the power to regulate "any air pollutant" related to motor vehicles that "contribute to air pollution" and may "reasonably be anticipated to endanger public health or welfare."[67] In 2010, as a precursor to the Obama administration's push for heightened vehicle emission regulations, the EPA released its "Endangerment Findings," sending shockwaves through the motor vehicle industry by mandating new and more aggressive corporate average fuel economy (CAFE) standards. As a result, interest groups challenged the EPA's authority to promulgate such sweeping regulations over vehicles. Those groups suffered the same fate as their predecessors who challenged the EPA in court.[68] However, unlike the court's previous review, the Energy Policy and Conservation Act (EPCA) and the NHTSA bolstered the court's holding that the EPA's regulatory reach was appropriate since it was done through a joint-agency rulemaking process, rather than individually by a singular agency, thus paving the way for agency partnerships.[69]

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65. The automotive industry tried to resist the EPA's authority controlling vehicle emissions and California's waiver by complaining that it would be unduly disruptive "to subject manufacturers to a patchwork of federal and *multiple state* standards." Complaint, Cal. v. Chao, (2019) (No. 1:19-cv-02826-KBJ) (emphasis added); *see also* Motor Equip. Mfrs. Ass'n v. EPA, 627 F.2d 1095, 1109 (D.C. Cir. 1979); Massachusetts v. EPA, 549 U.S. 497, 528 (2007).

66. *See Massachusetts*, 549 U.S. at 528.

67. 42 U.S.C. § 7521.

68. Coal. for Responsible Regul. v. EPA, 648 F.3d 102 (D.C. Cir. 2012), *rev'd in part*, Util. Air Regul. Group v. EPA, 573 U.S. 302 (2014).

69. Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards, 75 Fed. Reg. 35, 324 (May 7, 2010). The EPA and NHTSA promulgated a joint rule, as required by the EPCA, to set increasingly stringent fuel economy standards for motor vehicles. *Id.*

B. The Energy Policy and Conservation Act

During the height of the Cold War and the Arab-Israeli War in 1973, the Arab members of the Organization of Petroleum Exporting Companies (OPEC) imposed an oil embargo on the United States.[70] Because of the United States market's reliance on foreign oil, the embargo significantly strained the U.S. economy. The embargo's paralyzing grip over U.S. markets and its transportation industry triggered a policy shift in Washington D.C. aimed at preventing any future attacks on the U.S.'s vulnerability to oil imports.[71] Among the factors Congress considered, the impact of fluctuating fuel costs on average Americans was paramount to its new policy and managing the Nation's fuel supply.[72] Congress subsequently directed this shift in policy by passing the EPCA.[73] The EPCA created a new federal agency, the NHTSA, and vested the NHTSA with the authority to set national fuel economy standards for all new motor vehicles.[74] Additionally, Congress included a preemption provision under the EPCA, similar to the CAA but without California's Exception, to maintain a national, uniform program regulating gas prices, fuel supply, and mileage. Nearly 35 years later, the language that authorized the NHTSA to regulate fuel economy standards became the linchpin for the Trump administration's Safer Affordable Fuel-Efficient Rules (SAFE Rules) for Model Years 2021-2026.[75]

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70. *Oil Embargo, 1973-1974,* OFF. OF THE HISTORIAN, https://history.state.gov/milestones/1969-1976/oil-embargo [https://perma.cc/K62A-QRTM] (last visited Oct. 7, 2022).

71. *Id.*

72. *See supra* Part II.C.

73. 49 U.S.C. § 32901(a)(10).

74. *Id.*

75. *Id.* § 32919:

> When an average fuel economy standard prescribed under this chapter is in effect, a State or a political subdivision of a State may not adopt or enforce a law or regulation related to fuel economy standards or average fuel economy standards for automobiles covered by an average fuel economy standard under this chapter.

The SAFE Rule repealed EPA and NHTSA rules from the Obama administration and froze emissions standards for new cars produced through 2026 at 2020 levels, preventing heightened state regulations created by California's waiver provision from being effective.

C. Agency Overlap

Congress increased the NHTSA's impact on the auto industry by vesting the NHTSA with the authority to set fuel economy standards, requiring car companies to invest in technologies to improve fuel economy and reduce oil dependency. The NHTSA's authority left automakers virtually unable to object to any new "federal standard" under the EPCA.[76] However, Congress did not create the NHTSA's power in a vacuum. Congress used the specific language of a "federal standard" in the EPCA to refer to the emissions standards under section 209(b) of the CAA and to affirmatively recognize the impacts of the California Exception on the NHTSA's decision-making process.[77] By creating overlap between the CAA and EPCA, Congress recognized that one agency's regulation could indirectly affect the regulatory goals of another, so it wanted to ensure that the NHTSA did not overextend itself by infringing on the rights of another coequal federal agency. In light of this, in 1994, Congress decided to expressly recognize the CAA's impact when it updated the EPCA and required the NHTSA to consider "other motor vehicle standards of the Government," thus limiting the NHTSA's regulatory reach.[78] The amended language solidified the separation between the EPA's control over emissions and the NHTSA's limited role regulating fuel economy.

Since the Congressional amendments to the EPCA, several federal district courts held that the EPCA prevents the NHTSA from regulating GHGs.[79] Nevertheless, the NHTSA determined that any state's regulation of vehicle emissions *was* directly related to fuel economy standards and within their regulatory control because emissions indirectly impact fuel economy.[80] As a result, the NHTSA decided that the California Exception was inapplicable when the NHTSA chose to target the state's emission regulations through its interpretation and application of the EPCA. Significantly, the NHTSA found that the California Exception had no

76. National Environmental Policy Act of 1975, Pub. L. No. 94-163, §301, 89 Stat. 871, 904.

77. *Id*.

78. 49 U.S.C. § 32902(f)

79. *See* Green Mountain Chrysler v. Crombie, 508 F. Supp. 2d 295 (D. Vt. 2007); Cent. Valley Chrysler-Jeep, Inc. v. Goldstene, 529 F. Supp. 2d 1151 (E.D. Cal. 2007).

80. 49 C.F.R. pt. 531, app. B, § (a)(1)(C); 49 C.F.R. pt. 533, app. B, § (a)(1)(C) (''The most significant and controlling factor in making the measurements necessary to determine the compliance of automobiles with the fuel economy standards in this part [531 and 533] is their rate of tailpipe carbon dioxide emissions.'').

prohibitory control over the NHTSA's ability to regulate emissions technology through its enforcement of a national fuel economy standard.[81] Even if it impacted the EPA's emissions regulations, the NHTSA argued that its regulations still control because no matter how California labeled its emissions regulations under the California Exception, the impact on the EPCA's uniform fuel economy program remained the same.

D. A Legitimate National Government Interest for Uniform Emissions Standards

The Constitution establishes the Federal Government's power to enforce legislation over state laws. The Supremacy Clause[82] and Commerce Clause[83] vest Congress with the authority to make laws necessary for establishing a legitimate national governmental interest—i.e., air quality standards and fuel economy standards. Because the federal government is the only national authority that regulates commerce between the states, states are prohibited from regulating or even burdening commerce outside of their respective geographic jurisdiction.[84] For this reason, the Trump administration viewed the California Exception as an assault on Congress's traditional role in establishing a national interest. Because the California Exception allowed California to directly impact interstate commerce in the form of vehicle manufacturing and sales, the EPA and NHTSA believed the California Exception created disunity and frustrated the federal agencies' promotion of a national program.

Having a national government interest is not an automatic death sentence to states challenging the federal government's authority under the Commerce or Supremacy Clauses. Federal courts assess claims made by states challenging the federal government's authority to regulate commerce under a rational basis test. If a court concludes "there is no rational basis for a congressional finding that the regulated activity affects

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81. 49 C.F.R. pt. 531, app. B, § (a)(1)(D); 49 C.F.R. pt. 533, app. B, § (a)(1)(D) (''Almost all technologically feasible reduction of tailpipe emissions of carbon dioxide is achievable through improving fuel economy, thereby reducing both the consumption of fuel and the creation and emission of carbon dioxide.'').

82. U.S. CONST. art. VI, cl. 2. In identifying "the supreme Law of the Land," the Supremacy Clause specifies "this Constitution, and the laws, made in pursuance thereof; and all Treaties made, or which shall be made, under the Authority of the United States." *Id.*

83. U.S. CONST. art. I, § 8, cl. 3 ("The Congress shall have power . . . to regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes.").

84. S. Pac. Co. v. State of Ariz. Sullivan ex rel., 325 U.S. 761, 779–80 (1945).

interstate commerce," a state is free to enact its own legislation or policy addressing that activity.[85] Under this test, if the EPA or the NHTSA demonstrates a legitimate interest served by their emissions or fuel economy regulations, a court will likely uphold either agency's action. Because it is generally accepted that Congress has the authority to control (1) the channels of interstate commerce; (2) the instrumentalities of persons and things in interstate commerce; and (3) those activities that *substantially affect* interstate commerce, it is within the purview of agencies like the EPA or the NHTSA to claim California's Exception is substantially affecting interstate commerce by regulating vehicles produced and sold nationwide.[86]

E. Reviewing California's Authority in the Context of Interstate Commerce

When it comes to California and a review of its inherent authority to draft environmental regulations, a court first considers the rule's impact on the Nation's commerce. A reviewing court must answer three general questions to determine whether a law adversely impacts interstate commerce.[87] First, a court must decide if California's regulations are discriminatory. Next, the court must determine if California has a proprietary interest in the regulated activity. Lastly, and most importantly, the court must decide if the rule adversely affects interstate commerce and whether California's purpose for enacting the law outweighs the benefits of a unified national program.[88] One could argue that, aside from California's Exception, any rules governing air pollutants implicitly impacting vehicle technology and production violates the dormant commerce clause and exceeds the State's constitutional authority. Conversely, California could argue that protecting the public health, safety, and welfare of its residents—all inherent state obligations—sufficiently justifies expanding state regulations impacting the federal program. In this regard, the Constitution created clear sovereign control by states pursuant to health and safety and a mechanism that grants significant discretion to national commerce interests. However, courts rarely side with state challenges to national programs under Article I

85. Hodel v. Ind., 452 U.S. 314, 323 (1981).
86. STEVEN FERREY, ENVIRONMENTAL LAW 163 (8th ed. 2019).
87. *Id.*
88. *Id.* at 167.

authorities to resolve the tension between the Tenth Amendment and Article I powers.[89]

1. Prong 1: Discrimination

Reviewing the first question of discrimination before the court, California's Exception discriminates by its unlawful regulation against articles of interstate commerce, and it fails to coincide with the national program or policy. The 49 other states are barred by this rationale from having their own California Exception under either the CAA or EPCA. If all the states could set grossly different standards without a guiding national standard, it would create uncertain, unpredictable forecasts for manufacturing and compliance.

2. Prong 2: Proprietary Interests

In the past, California struggled to address the court's inquiry regarding proprietary interests over statewide regulations. In 2010, California legislated a state carbon fuel program regulating fuel sources. Due to its proprietary interest in discriminating against out-of-state fuel substitutes over its own state fuels, a court enjoined the program as facially discriminatory.[90] However, California's precedent for establishing its own standards ensured the continuances of its sixty-year practice. In this case, reversing the pre-established regulation process may prove difficult. Arguably the most important and final question before the courts involves an easy answer based on this history. The courts consistently hold that California's "especially powerful interest in controlling harmful effects of air pollution" outweighs any federal interest under the Commerce Clause, placing great weight on the legislative intent and history of the CAA.[91]

89. *See* City of Phila v. N.J., 437 U.S. 617, 626 (1978). After New Jersey enacted a statute prohibiting the importation and disposal of most solid waste originating outside of New Jersey, a court applied strict scrutiny and held it did not need to decide the purpose of the state's rule because, "the evil of protectionism can reside in legislative means as well as legislative ends." *Id.*

90. *See* Rocky Mountain Farmers Union v. Goldstene, 843 F. Supp. 2d 1071, 1094 (E.D. Cal. 2011).

91. *See* Pac. Merch. Shipping Ass'n v. Goldstene, 639 F.3d 1154, 1180–81 (9th Cir. 2011).

3. Prong 3: A National Program

The EPA and NHTSA must maintain a national program that can adapt to fit a diverse and dynamic nation.[92] Environmental agencies have not always properly balanced the risks of anticipated harm with the impacts on interstate commerce.[93] Oftentimes, the EPA sets rules governing various energy or environmental programs subject to challenges under a narrow application of the governing statute in court.[94] For the agencies, developing regulations like the SAFE Rule requires a foundation of well-developed research and findings instead of hunches or wild guesses.[95] Otherwise, the agencies' collective or individual failure to articulate the rationale behind its rules, like California's Exception, would be arbitrary and capricious.[96]

To justify its rules impacting interstate commerce, the EPA and the NHTSA often rely on financial metrics to articulate the regulatory purpose. In the 1970s, after initially facing obstacles while establishing a national gasoline lead level, the EPA switched its justification for the regulations from the anticipated impact on health to science-backed research over a scaled implementation plan. In *Ethyl Corporation v. EPA*, the agency fashioned a graduated phasedown over a five year period for

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92. Dewitt John et al., *Resolving the Paradox of Environmental Protection,* ARIZ. STATE UNIV: ISSUES IN SCI. & TECH. (1998), https://issues.org/howes/ [https://perma.cc/4GHQ-JH8S].

93. Rsrv. Mining Co. v. EPA, 514 F.2d 492, 536 (8th Cir. 1975).

> Concededly, the trial court considered many appropriate factors in arriving at a remedy, such as a) the nature of anticipated harm, b) the burden on Reserve and its employees from the issuance of the injunction, c) the financial ability of Reserve to convert to other methods of waste disposal, and d) a margin of safety for the public.

94. *See generally* Ethyl Corp. v. EPA, 541 F.2d 1 (D.C. Cir. 1976). By focusing on economics, the EPA determined the cost to the industry would only increase between $82 million and $133 million compared with the $1.5 billion the industry already intended to invest in refining lead capacity through the year 1980, which helped the court address the effectiveness of a gradual regulatory program. *Id.*

95. *Id.*

96. The inadequacy of the comment period, or failure to promulgate rules on adequate findings, is inconsistent with rulemaking under the Administrative Procedure Acts section 706. Courts have become increasingly concerned that these agencies will fail to justify a promulgated rule when that rule was based on scant history of the subject or fail to notify, disclose pertinent data, or respond to comments. *See* U.S. v. N.S. Food Prods. Corp., 568 F.2d 240, 252 (2d Cir. 1997).

lead levels in gasoline from 1.7g to 0.5g.[97] The five year period, rather than the proposed four year period, represented a key aspect to the EPA's regulation, with a primary focus on the "moderation [of] the economic and technological impacts of the regulations during the period over which the reduction would be accomplished."[98] The combination of the EPA's graduated economic and health based approach (similar to how the EPA and the NHTSA justified the SAFE Rules) ultimately convinced the court of the lawfulness of the agency's action under the commerce clause.

IV. CONTROL OVER EMISSIONS AND CHANGING HANDS

A. Federal Agencies and Presidential Administrations

The Trump Administration's SAFE Rule targeted the regulations initially promulgated during President Obama's presidency and California's Exception. In 2012, between President Obama's first and second term, the NHTSA and the EPA promulgated a joint rule targeting vehicle emissions for light-duty vehicles produced between 2017–2025 [hereinafter "2012 Rules"].[99] The 2012 Rules aimed to reduce GHG emissions from new passenger cars and light trucks by 50% by 2021 compared to the 2010 levels, and also set a 50-mile per gallon goal for all fleet vehicles.[100] Contributing to this regulatory plan, scientists and regulators considered: the likelihood of average vehicle weight reducing over time; tire rolling resistance lessening; improving vehicle aerodynamic designs; increasing the amount of cleaner burning diesel engines; and improving air conditioning systems.[101] Regulators initially focused on these technology factors, rather than volatile resource factors like oil availability or adverse weather conditions, since technology was a proven scale for measuring anticipated improvement over time. As a result of these technology-based considerations, the NHTSA and the EPA left the door open to later potential challenges based on the presumptions that technology should improve as anticipated, or that the cost and ultimately the financial burden of these improvements would pass to the consumers.

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97. Control of Lead Additives in Gasoline, 38 Fed. Reg. 33734 (1973).

98. *Id.* at 33739.

99. *See* 2017 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards, 77 Fed. Reg. 62624, (Oct. 15, 2012) (to be codified at 40 C.F.R. pts. 85, 86, 600 and 49 C.F.R. pts. 523, 531, 533, 536, 537).

100. *Id.*

101. *Id.* at 7–8.

After President Trump took office in 2017, the EPA and NHTSA announced a revised and joint rule, axing the Obama-era fuel and emission standards.[102] The two agencies found the 2012 Rules were no longer attainable, due in part to the Obama administration's assumptions concerning the costs associated with technological improvements to fuel economy, gasoline prices, and consumer acceptance of EVs.[103] Through the SAFE Rule, the EPA and the NHTSA projected that reducing the 2012 Rules' targeted fuel economy for new vehicles from 46.7 mpg down to 40.4 mpg would cut technology costs that are otherwise required to comply with the 2012 Rules; this would save between $86 and $126 billion over the lifetime of the SAFE Rule—a savings which would ultimately pass to new car buyers.[104]

Under the Trump Administration's SAFE Rule, the EPA froze emissions standards at 2020 target levels through 2026 based on the 2012 Rules.[105] Freezing emissions standards carried two immediate and significant impacts. First, auto manufacturers did not have to continue improving vehicle emissions beyond 2020, essentially dismantling the targets established by the 2012 Rules. Second, the EPA believed that the cost associated with manufacturing and developing new technology would be passed to new vehicle purchases if it mandated auto manufacturers develop greener, more emissions friendly vehicles. The EPA and NHTSA estimated all of the regulations under the SAFE Rule would save the motor vehicle industry a total of $252.6 billion in technology costs and drive the

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102. *See* The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks: Proposed Rule, 83 Fed. Reg. 42986, 43310, 43066, 43067 (Aug. 24, 2018) (to be codified at 40 C.F.R. pts. 85, 86).

103. *Id.* The EPA and NHTSA felt the Obama-era agencies "were optimistic" about the potential for technological innovation or could have anticipated how the industry "significantly changed."

104. *See* U.S. DEP'T OF TRANSP.: NHTSA*, U.S. DOT and EPA Put Safety and American Families First with Final Rule on Fuel Economy Standards*, (Mar. 31, 2020), https://www.nhtsa.gov/press-releases/safe-final-rule [https://perma.cc/5ZG8-8W8S].

105. The EPA estimated tailpipe emissions fell by 3 g/mi to 357 g/mi, and fuel economy increased by 0.2 mpg to a maximum of 24.9 mpg. The EPA concluded that, as a result of record low CO2 emissions in 2017 and record high fuel economy, it was not necessary to force greater technological innovation on the automobile industry. RICHARD LATTANZIO ET AL., CONG. RSCH. SERV., R45204, VEHICLE FUEL ECONOMY AND GREENHOUSE GAS STANDARDS: FREQUENTLY ASKED QUESTIONS (2021).

average vehicle ownership costs down by $2,240 per new vehicle.[106] The joint-agency rule elevated the projected and gradual economic savings above the public health metrics and environmental concerns addressed in the 2012 Rules.

1. The SAFE Rule: Not So Fast

The SAFE Rule proved less consumer friendly than reported by the EPA and NHTSA. The EPA and NHTSA's joint rule contained conflicting language, indicating that while new vehicle owners could expect lower costs, all drivers would face increasing fuel costs because manufacturers were no longer required to improve fuel economy, yet oil demand remained the same or increased. Buried in the joint rule, both the EPA and NHTSA recognized that "[d]rivers [would] experience higher costs as a consequence of new vehicles' increased fuel consumption, and from the added inconvenience of more frequent refueling stops required by their reduced driving range."[107] Regardless of the administration's acknowledgement, the desire for the biggest and most unified program prompted the Administration to continue targeting the 2012 Rules and California's Exception. Yet, the biggest and most controversial issue with the SAFE Rules was not the impact on consumer costs, but its approach to the California Exception and the states taking a proactive role in reducing emissions under the CAA.[108]

2. California's Exception Is a National Program

Under the CAA, California can indirectly establish a national, uniform program. Section 177 of the CAA authorizes other states to adopt California's motor vehicle emission standards as long as they replicate all of California's emissions standards.[109] Each state seeking the EPA's approval must adopt standards identical to California, which highlights

106. *Fact Sheet: MYs 2021-2026 CAFE Proposal - By the Numbers,* U.S. DEP'T OF TRANSP. & EPA, https://www.nhtsa.gov/sites/nhtsa.gov/files/documents/rev_fact_sheet_cafe_nprm_by_the_numbers_003-tag.pdf [https://perma.cc/VE5W-UCKV] (last visited Nov. 25, 2022).

107. The Safer Affordable Fuel-Efficient Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks, 86 Fed. Reg. 42986 (Aug. 23, 2018) (to be codified at 49 C.F.R. pts. 523, 531, 533, 536, and 537).

108. States taking a proactive role include New York, Massachusetts, Vermont, Maine, Connecticut, Rhode Island, New Jersey, Oregon, New Mexico, Arizona, Maryland, and the District of Columbia.

109. 42 U.S.C. § 7507.

concerns raised about a national legitimate interest in creating uniformity.[110] Moreover, section 209(e)(2)(B) of the CAA authorizes states to adopt California's nonroad vehicle and engine emission standards, highlighting the significant role Congress anticipated California would play in setting an alternatively approved national program. So, when the EPA and NHTSA promulgated the joint SAFE Rule, the agencies effectively suspended both California's waivered exceptions and the same alternatively approved standard adopted in 13 separate jurisdictions.[111] Rather than limiting vehicle emissions' environmental impact, the SAFE Rule lowered emission levels nationwide and froze planned improvements to technologies, which would improve air quality standards.

B. California's Attempt to Contract around the SAFE Rule

In 2019, the Department of Justice (DOJ) launched an investigation into whether a voluntary agreement between California and four automakers that established stricter emission regulations violated federal antitrust laws.[112] The contract between California and the four automakers established tougher emission and fuel economy standards that were similar to the 2012 Rules, but higher and more stringent than the SAFE Rule.[113] The DOJ believed California and the automakers violated "federal competition law by agreeing with each other to follow tailpipe-emissions standards," and privately agreeing to standards that were inconsistent with

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110. *Id.*

111. The thirteen separate jurisdictions include New York, Massachusetts, Vermont, Maine, Connecticut, Rhode Island, New Jersey, Oregon, New Mexico, Arizona, Maryland, and the District of Columbia. *See* CAL. CODE REGS. tit. 13, § 1900–05; CAL. CODE REGS. tit. 13, § 1962.1 (2022).

112. David Shepardson, *U.S. Launches Antitrust Probe Into California Automaker Agreement,* REUTERS (Sept. 6, 2019, 9:54 AM), https://www.reuters.com/article/us-autos-emissions/u-s-launches-antitrust-probe-into-california-automaker-agreement-idUSKCN1VR1WG [https://perma.cc/S9SK-NUH9] (Honda, Ford, BMC and Volkswagen).

113. The agreement between the automakers and California agreed to improve fuel economy figures by 3.7%. This figure is less than the previous regulations of 5% under the Obama administration and greater than the Trump administration's 1.5%. The Trump administration's target of 40 mpg by 2026 is 14 mpg less than the target set by the Obama administration. Sean Szymokowski, *Ford, Honda, VW and BMW Seal California Fuel-Economy and Emissions Deal,* CNET (Aug. 18, 2020, 7:19 AM), https://www.cnet.com/roadshow/news/ford-honda-vw-bmw-california-fuel-economy-emissions/ [https://perma.cc/7CPZ-6XXN].

federal law and regulation.[114] The DOJ felt the contract was problematic because it sent the message that if companies were willing to put environmental issues ahead of the federal agencies' ability to establish a national and uniform program, nothing would prevent companies from bypassing the reach of the federal government in the future. The DOJ investigation eventually dropped after the DOJ concluded that no laws were broken. Nevertheless, a clear struggle emerged, pitting the states and their pursuits for a cleaner environment against the federal government and regulation enforcement.[115]

As a result of the DOJ's dropped investigation, the Trump administration threatened to strip the CAA's California Exception. This significant threat targeted the provision that enabled California to promulgate rules for nearly 60 years, which California used to increase the number of zero-emission vehicles (ZEV) in its state. California Air Resources Board Chair, Mary Nichols, responded to the Trump administration's threat by reaffirming her state's commitment to contracting with auto manufacturers and implementing regulations to preserve emissions standards.[116] House Majority Leader and California native Nancy Pelosi (D-CA) asked the DOJ to drop its investigation and challenged the President's threat, introducing the fight to the halls of Congress.[117]

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114. Michael Wayland, *DOJ Launches Antitrust Probe over California Emissions Deal with Automakers*, CNBC (Sept. 6, 2019, 10:46 AM), https://www.cnbc.com/2019/09/06/doj-launches-antitrust-probe-over-auto-emissions-deal-with-california-wsj-reports.html [https://perma.cc/EQ3L-WDUH].

115. *Trump's Wrong Turn on Clean Cars: The Effects of Fuel Efficiency Rollbacks on the Climate, Car Companies, and California: Hearing Before the Subcomm. on Env't of the Comm. on Oversight and Reform*, 116th Cong. 11–32 (2019) (statement of Sheldon Whitehouse, U.S. Sen., Rhode Island) [hereinafter *Trump's Wrong Turn*].

116. *California and Major Automakers Reach Groundbreaking Framework Agreement on Clean Emission Standards*, OFF. OF GOVERNOR GAVIN NEWSOM (July 25, 2019), https://www.gov.ca.gov/2019/07/25/california-and-major-automakers-reach-groundbreaking-framework-agreement-on-clean-emission-standards/ [https://perma.cc/283C-S355]. ("[I]f the White House does not agree, we will move forward with our current standards but work with individual carmakers to implement these principles . . . we will continue to enforce *our* regulations and pursue legal challenges to the federal rule.") [hereinafter *California Framework Agreement on Clean Emission Standards*].

117. *Compare* 2017–2025 Model Year Light-Duty Vehicle GHG Emissions and CAFE Standards: Supplemental Notice of Intent,76 Fed. Reg. 48758 (Aug. 9, 2011) (to be codified at 40 C.F.R. pts. 85, 86, 600 and 49 C.F.R. pts. 531, 533) *with* 2017 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions

For many politicians, the fight brewing between California and the federal agencies essentially concerned the federal government's role in regulating private enterprises and combating global warming.[118] Drawing on the SAFE Rule's focus on consumer savings, Democratic leaders in Congress argued that maintaining the Obama-era regulations would save consumers $1.7 trillion in oil costs, which motivated oil lobbyists to adamantly oppose the 2012 regulations.[119] This divide highlights the political rift between the 2012 Rules, the California Exception, and the critics' comments regarding the true purpose of the SAFE Rules in replacing the 2012 Rules: increasing the oil industry's revenue. This argument gained traction when lawmakers and pundits alleged that the then-EPA Administrator Scott Pruitt only relied on reports of groups who received an estimated $49 million from fossil fuel lobbyists when promulgating the SAFE Rule.[120] In light of the SAFE Rule increasing the nation's reliance on oil, this critique highlights how the NHTSA and EPA completely ignored Congress' initial purpose in passing the EPCA: to counter the crippling effect of the U.S. market's reliance on oil.

C. Disjointed Rule Making

1. SAFE Rule: Part One

The EPA and NHTSA published the SAFE Rule in two parts rather than a single, unified regulation targeting California's Exception and the Obama administration's 2012 Rules. Part One of the SAFE Rules expanded the NHTSA's interpretation under the EPCA regarding its authority to preempt state regulations having a "direct or substantial effect of regulating or prohibiting tailpipe carbon dioxide emissions from automobiles or automobile fuel economy."[121] Because California's

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and Corporate Average Fuel Economy Standards, 77 Fed. Reg. 62624 ¶ 76 (Oct. 15, 2012) (to be codified at 40 C.F.R. pts. 85, 86, 600 and 49 C.F.R. pts. 523, 531, 533, 536, 537). President Obama directed the EPA and NHTSA to work with California to develop GHG and fuel-economy standards for new vehicles between 2017 and 2025. Pelosi called for the DOJ to "end [the] sham investigation and return to policing actual anti-competitive conduct" rather than "seek[ing] to weaponize law enforcement for partisan political purposes to advance the Trump Administration's toxic special interest agenda."

118. *Compare* 76 Fed. Reg. 48758 (Aug. 9, 2011) *with* 77 Fed. Reg. 62624 ¶ 76 (Oct. 15, 2012).

119. *Trump's Wrong Turn*, *supra* note 115, at 11.

120. *Id.*

121. Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program, 84 Fed. Reg 51318–319, 51362 (Sept. 27, 2019).

Exception regulated emissions but indirectly impacted fuel economy, the NHTSA believed that the EPCA conferred EPA-equivalent authority to the NHTSA. Based on this authority, the NHTSA assumed it could indirectly regulate emissions through the NHTSA's establishment of a uniform, national fuel economy standard. The NHTSA's interpretation met immediate pushback by states across the country, claiming the NHTSA's rationale directly conflicted with congressional intent in including section 177 under the CAA.[122] The impact of the NHTSA's decision to block California from participating in its congressionally vested authority to regulate emissions went beyond California's borders. All jurisdictions that adopted California's waiver from the 2012 Rules, as well as California's state EV program, experienced dramatic impacts. As a result of Part One of the SAFE Rule, 24 state Attorney Generals challenged the NHTSA in court.[123]

2. SAFE Rule: Part Two

Part Two of the jointly issued SAFE Vehicle Rule targets vehicular emissions standards and weakens the standards under the 2012 Rules.[124] The Trump EPA wanted to distance itself from the Obama administration's 2021–2026 standards. In Part Two of the SAFE Rule, the EPA amended the old rule requiring auto manufacturers to improve CO_2 emissions standards, thus changing the Obama-era annual improvement requirement from 5% to a modest 1.5%.[125] The EPA justified its decision for the policy shift based on consumer purchasing habits reflected in the increase in crossover vehicle and SUV purchases as opposed to the fuel-efficient sedans envisioned in 2012.[126]

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122. 42 U.S.C. § 7507.

123. *See* Complaint, Cal. v. Chao, (2019) (No. 1:19-cv-02826-KBJ); *D.C. Circuit Stays Litigation Over EPA Rescission of California Waiver to Regulate Vehicle Emissions*, NAT. LAW REVIEW (Feb. 10, 2021), https://www.natlawreview.com/article/dc-circuit-stays-litigation-over-epa-rescission-california-waiver-to-regulate [https://perma.cc/25LA-MPQT] (on February 8, 2021, the D.C. Circuit issued an order granting the Biden administration's motion to stay litigation over Part 1 of the Trump-era Safer Affordable Fuel Efficient Vehicles (SAFE) Rule).

124. Wilmer Hale, et. al., *Trump Administration Issues Second Part of SAFE Vehicles Rule*, JD SUPRA (Apr. 4, 2020), https://www.jdsupra.com/legalnews/trump-administration-issues-second-part-94777/ [https://perma.cc/4FKA-5CQA].

125. U.S. DEP'T OF TRANSP.: NHTSA*, supra* note 104.

126. *Id.*

D. Preemption

As a result of the SAFE Rule, California, like all other states in the nation, faced tough obstacles when implementing unique, state level regulatory programs because of preemption issues. With state programs competing with federal law, laws in one state may conflict with the laws of the more controlling sovereign. Congress granted California a waiver under the CAA, but if the EPA or NHTSA establish a regulation from a federal statute "which is so pervasive . . . that Congress left no room for States to supplement it" or where there is a "federal interest . . . so dominant that the federal system will be assumed to preclude enforcement of state laws on the same subject," states like California will always end up defeated.[127] Even if a statute does not expressly limit a state's authority to regulate an industry, it can still implicitly prevent state regulation through: (1) field preemption,[128] (2) conflict preemption,[129] or (3) obstacle preemption.[130] Unless "Congress . . . unequivocally expresses its intent to abrogate" its regulatory authority, the necessity for a national, uniform plan controls.[131] Because California's Exception challenges the SAFE Rule's emissions standards and the federal fuel economy standards, the question becomes whether federal interest preempts California's legislation when it appears the EPCA and CAA are at odds.

1. Conflicting Preemptive Authority

Since the EPCA's enactment, questions arose as to whether courts should read Congress's preemption clause in isolation or together with the CAA's California Exception.[132] District courts in California and Vermont held that Congress did not intend the EPCA's preemption clause to control the CAA's meaning.[133] If the courts allowed the NHTSA to interpret the EPCA's provisions to target and regulate a state's emission standards, then

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127. Rice v. Santa Fe Elevator Corp., 331 U.S. 218 (1947).

128. 42 U.S.C. § 7543(a)-(b).

129. *See* Eng. v. Gen. Elec. Co., 496 U.S. 72 (1990).

130. *Id.* Generally, courts will identify whether the implied purpose or objective of a federal statute is silent but conflicts with a state's regulatory scheme, or when a federal regulatory scheme is so pervasive as to imply Congress left no room for the states to regulate.

131. Seminole Tribe of Fla. v. Fla., 517 U.S. 44 (1996).

132. Green Mountain Chrysler v. Crombie, 508 F. Supp. 2d 295 (D. Vt. 2007); Cent. Valley Chrysler-Jeep, Inc., v. Goldstene, 529 F. Supp. 2d 1151 (E.D. Cal. 2007).

133. *Id.*

the EPCA would essentially be able to regulate the very same vested authority held by the EPA, making the EPA obsolete.[134] Even though the NHTSA believes the EPCA's language allows it to consider provisions under the CAA which "directly or indirectly result in significant increase in the *energy* or *fuel* necessary to operate [a] motor vehicle,"[135] the NHTSA's broad interpretation of the EPCA is incorrect and an abuse of the powers Congress granted through legislation.

2. Preemption and the Supremacy Clause

The NHTSA's interpretation of the EPCA's preemptive authority over the California Exception is inconsistent with the Constitution's Supremacy Clause.[136] The Constitution's Supremacy Clause gives Congress the power to preempt state laws when Congress intends federal law to "occupy the field" of law at issue.[137] In the case of the Trump administration's SAFE Rule and the Obama administration's 2010 joint rule, there is a clear difference in the conflict between the federal government and California.[138] The EPA and NHTSA impermissibly assumed they could preclude enforcement of the CAA's California Exception by using a joint rule under the EPCA to control the regulation. Resting its decision on the EPCA, the NHTSA's new interpretation of the CAA and EPCA's unambiguous language created a radical policy shift. Prior to the EPA's and NHTSA's SAFE Rule, Congress clearly expressed its intent to abrogate emissions regulations in California to the states under section 209 of the CAA, and not to a multi-agency commission.[139] Unlike the Obama administration's 2010 Rules, which relied upon *complimentary* language under the EPCA in support of the EPA's authority under the CAA, the

134. *Id.*

135. Center for Biological Diversity v. Nat'l Highway Traffic Safety Admin., 538 F.3d 1172 (9th Cir. 2008) (quoting 49 C.F.R. § 520.5(b)(8)) (emphasis added).

136. NHTSA determined that state requirements regulating tailpipe emissions from automobiles are related to fuel economy standards. ''[A]utomobile fuel economy is directly and substantially related to automobile tailpipe emissions of carbon dioxide.'' 49 C.F.R. pt. 531, app. B, § (a)(1)(A); 49 C.F.R. pt. 533, app. B, § (a)(1)(A).

137. *See* U.S. CONST. art. VI; Maryland v. Louisiana, 451 U.S. 725 (1981). ("It is basic to this constitutional command that all conflicting state provisions be without effect.").

138. Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards, 75 Fed. Reg. 35, 324 (May 7, 2010).

139. *See* Seminole Tribe of Fla. v. Florida, 517 U.S. 44 (1996).

NHTSA and EPA's SAFE Rules impermissibly rely upon *conflicting* language between the two statutes.[140]

The NHTSA incorrectly interpreted the EPCA's preemption provision since it obstructed Congress's legislative intent to enshrine California's role in setting emissions standards when Congress drafted and amended the CAA.[141] The NHTSA argues its interpretation of the EPCA to regulate the national fuel economy standard only partially impacts GHG emissions, and the courts should not review its regulatory authority so broadly as to conflict with the CAA and exceed the agency's authority. This interpretation completely violates the Administrative Procedures Act because it establishes a new policy instead of amending ambiguous language or providing clarity for an ill-defined term. Instead, nothing in the EPCA directs the NHTSA to regulate the EPA's vested authorities in this regard.[142] The NHTSA cannot use the EPCA's directive to regulate fuel-economy standards while also regulating vehicle emissions under the CAA; by doing so, it attempts to regulate something already covered by Congress in the CAA.[143]

3. EPCA's Established Preemptive Reach

The NHTSA's novel action completely disrupts the settled understanding of the EPCA's preemptive scope because California did not set out to regulate fuel economy standards. California proved that it regulated emissions standards when it openly took actions consistent with the CAA by filing a waiver with the EPA Administrator.[144] If Congress originally intended the NHTSA to regulate tailpipe emissions through establishing fuel economy standards, that purpose would directly conflict with Congress's delegation of legislative power to the EPA and the EPA Administrator's duty to establish uniform, national *emissions* standards.[145] The NHTSA's understanding of the "related to" language in the EPCA is like a hockey referee watching a football game and attempting to step onto the field and signal offsides. Sure, both sports contain rules regarding

140. Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards, 75 Fed. Reg. 35, 324 (May 7, 2010).

141. *See supra* Part II.C.

142. *See* Chevron, U.S.A. Inc. v. Nat. Res. Def. Council, Inc., 467 U.S. 837, 843–44 (1984) (stating that the Court will only defer to an agency's interpretation of either a statute or regulation when that interpretation relates to the ambiguous terms of a statute that the *agency* administers).

143. *Id.*

144. Clean Air Act, § 209; 42 U.S.C § 7543(b).

145. Whitman v. Am. Trucking Ass'n, 531 U.S. 457, 468 (2001).

"offsides" and use referees to officiate, but the two are completely different and governed by different rules.

Even if California's regulation of tailpipe emissions indirectly impacts the NHTSA's regulatory control over fuel economy, the Supreme Court's historical focus on a statute's purpose undermines the agency's preemption argument.[146] Since the CAA—not the EPCA—expressly conditioned California's Exception through its three-step approval process under section 209, the Court requires more than a single agency's broad interpretation of the EPCA to find that Congress intended to alter the constitutional balance between the states and the federal government.[147] The purpose of the CAA was the establishment of NAAQs and to extend federal agency oversight in the motor vehicle industry. California's approved waiver complies with the very purpose Congress intended when drafting the original statute. To this point, several federal courts have already examined the preemption issue between the EPCA's "related to" language and the CAA's waiver process and ruled that the EPCA does not control the CAA. In *Green Mountain Chrysler v. Crombie* and *Cent. Valley Chrysler-Jeep v. Goldstene*, federal district courts held that the EPCA did not preempt state tailpipe GHG emissions.[148] Despite the case precedent and constitutional jurisprudence, federal agencies continued targeting the 2012 Rules and the California Exception under incorrect theories about established law.

V. THE WAY AHEAD STARTS IN CALIFORNIA

A. A State's Rights

Allowing states to regulate traditional matters concerning health, safety, and welfare is essential to the separate and independent existence of a federal government.[149] A key component of the CAA is the

146. *See* PUD No. 1 of Jefferson Cnty. v. Wash. Dep't of Ecology, 511 U.S. 700 (1994) (holding that the Clean Water Act's provision allowing states to establish "other appropriate requirements" on the federal statute was lawful as long as those conditions were consistent with the purpose of the certification process).

147. *See* Gregory v. Ashcroft, 501 U.S. 452 (1991) (Justice O'Connor held that if Congress intended to alter the balance between the states and the federal government, then the language must be unmistakably clear through legislation).

148. *See* 508 F. Supp. 2d 295 (D. Vt. 2007); *see also* Cent. Valley Chrysler-Jeep, Inc. v. Goldstene, 529 F. Supp. 2d 1151 (E.D. Cal. 2007).

149. Nat'l League of Cities v. Usery, 426 U.S. 833 (1976), *overruled by* Garcia v. San Antonio Metro. Transit Auth., 469 U.S. 528 (1985).

independent role that states play in complying with the national program through SIPs. Because states play such an individualized role in identifying and regulating their own state level emissions, when NHTSA limited more aggressive emissions standards, it upended Congress's original intent under the CAA, thus allowing states to follow the California Exception and individually address NAAQs. California's purpose in regulating air quality standards includes the health of its citizenry—a keystone of the powers reserved to the respective states. Because states must submit SIPs to the EPA consistent with the CAA and California's Exception under section 177, the SAFE Rule Part Two muddied Congressional intent by withdrawing California's waiver, which improved its citizens' health and protected the environment.[150]

1. Stationary Sources and State Implementation Plans

The profound effects of the SAFE Rule also indirectly impact stationary source emissions.[151] As states implement plans combating pollutants in nonattainment[152] and attainment zones, the EPA and NHTSA's prohibition on states setting tougher emissions standards will require those states to revise their SIPs.[153] As a result of shifting the burden away from auto manufacturers and to the states in order to comply with NAAQs, stationary sources will bear the emissions-reduction burden. By revising the carefully crafted SIPs, the abrupt shift from mobile to stationary sources will "have the effect of shifting some responsibility to meet air quality requirements from transportation" to other industry sectors or electric utilities, which make up less and less of the annual GHG

150. *See* First Amended & Supplemented Complaint for Declaratory & Injunctive Relief ¶ 82, Cal. v. Chao, (2019) (No. 1:19-cv-02826-KBJ) (noting that 12 states have adopted GHG standards); *see also States That Have Adopted California's Vehicle Standards Under Section 177 of the Federal Clean Air Act*, STATE OF CAL.: CAL. AIR RES. BD., https://ww2.arb.ca.gov/sites/default/files /2019-10/ca_177_states.pdf [https://perma.cc/R85C-ZBWB] (listing 10 states that have adopted ZEV rules) (last visited Nov/ 25, 2022); Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program, 84 Fed. Reg 51318, 51320; 42 U.S.C. § 7410(a), (k).

151. Stationary sources are factories, refineries, power plants, and boilers which emit a variety of air pollutants. *Stationary Sources of Air Pollution*, EPA, https://www.epa.gov/stationary-sources-air-pollution [https://perma.cc/T7YY-GTUL] (last updated July 22, 2022).

152. Nonattainment zones are areas that have worse air quality than the NAAQs.

153. Attainment areas are those that meet or exceed the designated national standard.

emissions, as previously discussed.[154] The forced switch from vehicle emissions to stationary emissions frustrates Congress's reasons for authorizing states to follow the California Exception by choosing to shift some emission-reduction burdens to automobiles in order to permit economic growth that would otherwise be held back through costly taxes on these stationary sources.[155]

Forcing states to back away from aggressive regulations on automobiles and shift the emissions burdens back to stationary sources stunts factory production because it forces businesses to reinvest significant capital into cleaner energy sources. Compared to the gradual program proposed under the 2012 Rules, the disparate impact on stationary sources and SIPs will be immediate. In addition to the federal agencies' failure to directly address this impact, the EPA and NHTSA also failed to consider relevant and significant public comments during the notice-and-comment period,[156] making the SAFE Vehicle Rule "arbitrary and capricious," thus rendering it void.[157]

As a result of shifting the burden away from auto manufacturers to states in order to comply with NAAQs, stationary sources bear the emissions-reduction burden. The burden imposed by the switch to stationary sources far exceeds the relative environmental impact.[158] For instance, in California, the power sector's overall share of NO_x emissions decreased over 26% since 1990, which contributed to the California Air Resource board's shift in focus to address vehicle emissions issues.[159] Shifting the burden back to stationary sources exacerbates regulatory issues that the EPA already attempted to resolve when it tried reducing and tracking the "constant rate-of-discharge" from stationary sources.[160] A major drawback to this type of GHG enforcement is the EPA's inability to

154. The Safer Affordable Fuel-Efficient Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks, Final Environmental Impact Statement 4–39, 86 Fed. Reg. 42986 (Aug. 23, 2018) (to be codified at 49 C.F.R. pts. 523, 531, 533, 536, and 537); *see supra* Part II.E.

155. *See* H.R. Rep. No. 95-294, at 213 (1977).

156. The notice-and-comment period is the period available for the general public to comment on a proposed rule before it is published in the Federal Register.

157. Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983) (noting that rulemaking is procedurally flawed and "arbitrary and capricious" if agencies do not consider significant comments).

158. Shepardson, *supra* note 112.

159. California Sate Motor Vehicle Pollution Control Standards; Waiver of Federal Preemption; Decision, 58 Fed. Reg. 4166 (Jan. 13, 1993).

160. CLIFFORD S. RUSSEL et al., ENFORCING POLLUTION CONTROL LAWS 10 (1st ed. 1986).

monitor and enforce installations across the entire country.[161] Here, the EPA's inability to track the tens of thousands of stationary sources is relieved by regulations like the 2012 Rules or other state programs focusing on motor vehicles, since vehicle registrations and inspection programs, rather than the costly EPA stationary program, can control testing.[162]

2. A Waiver Is All but Certain

The EPA Administrator must grant California's vehicle emissions waiver if it meets the statutory criteria. The CAA directs that the EPA Administrator "shall" waive the prohibition on state automobile regulations in California if "standard[s] will be, in aggregate, at least as protective of public health and welfare as applicable federal standards," unless that state's determinations are arbitrary and capricious.[163] As such, vehicle emissions in California contribute nearly 40% of the state's GHGs and more than 40% of fog emissions.[164] About 32 million Californians breathe ozone- or particulate-polluted air each year, and 10 million Californians live in the only two "severe nonattainment" areas in the United States.[165] Clearly, California has reason to be concerned about vehicle emissions affecting the health of its citizens.

Conversely, the SAFE Vehicle Rule does not focus on the health of the average American. Instead, it increases U.S. oil consumption by 500,000 barrels a day, while reducing automakers' collective regulatory costs by approximately $300 billion.[166] California's emissions standards would result in a reduction of 14.4 million metric tons of carbon dioxide by 2025 and 25.2 million metric tons by 2030, which doubles when accounting for states who adopted California's policies under the CAA.[167] Considering the nationwide impacts before the SAFE Rule, the EPA

161. Acid Rain Program; General Provisions and Permits, Allowance System, Continuous Emissions Monitoring Excess Emissions and Administrative Appeals, 58 Fed. Reg. 3590, 3635 (Jan. 11, 1993) (to be codified at 40 C.F.R. pts. 72, 73, 75, 77, and 78).

162. Marianne Lavell, *Environmental Vise: Law, Compliance*, NAT'L L.J. § 1. para. 1085 (1993) ("A survey of corporate counsel found that two-thirds admitted that their companies recently had violated the environment laws.").

163. 42 U.S.C. § 7543(b)(1).

164. *California Framework Agreement on Clean Emission Standards*, *supra* note 116.

165. *Id.*

166. Complaint, Cal. v. Chao, (2019) (No. 1:19-cv-02826-KBJ) at ¶ 88.

167. Shepardson, *supra* note 112.

estimated that under the 2012 Rules, GHG emissions could reduce by 540 million metric tons, and oil consumption could reduce by 1.2 billion barrels during the lifetime of the 2021–2025 vehicles.[168] Instead, the SAFE Rule allows auto manufacturers to put lower performing cars on the roads by freezing emissions standards and increasing oil consumption. The EPA and NHTSA shifted the metrics that they consider from those impacting public health to those impacting corporations.

B. State Incentive Programs, Federal Enforcement, and Emissions

Empowering states to adopt California's emissions standards incentivizes auto manufacturers to develop more environmentally conscious vehicles.[169] California's ZEV program provides manufacturers with credits, transferable between parties, for delivering and/or placing EVs in California.[170] Considering California's responsibility to its citizens, ZEV-like programs and tougher emissions standards allow states to meet the NAAQs in extreme ozone nonattainment areas more efficiently. For California in particular, setting tougher vehicle emissions standards is crucial for its southern coast, where mobile sources are the largest contributors of GHGs.[171] In California alone, EVs produce over 9,000 pounds (lbs) less of CO_2 through charging than emissions released by gasoline powered vehicles, and 4,000 lbs less than hybrid cars.[172] Mobile emissions in California make up 30% of the state's total NO_x emissions, and contribute significantly to the volatile organic compounds in the atmosphere.[173] California governor, Gavin Newsom, addressed the tension between his state's intent with the federal agencies' purposes (EPA

168. H.R. 5226, 115th Cong. (2018).

169. *See* CAL. CODE REGS. tit. 13, § 1962.1 (2022).

170. *Id.*

171. Approval and Promulgation of Implementation Plans; California; California Mobile Source Regulations, 81 Fed. Reg. 39424, 39425 (June 16, 2016).

172. *Emission from Electric Vehicles* U.S. DEP'T OF ENERGY: ALT. FUELS DATA CTR., https://afdc.energy.gov/vehicles/electric_emissions.html [https://perma.cc/2SGU-AHR2] (last visited Oct. 7, 2022); ROBERT V. PERCIVAL et al., ENVIRONMENTAL REGULATION: LAW, SCIENCE, AND POLICY (8th ed. 2018). In 2010, the transportation sector alone accounted for 58% of all CO2, 56% of Nox, and 34% of all VOC emissions. *Id.*

173. *Air Pollutant Emissions Trends Data, National Annual Emissions Trend,* EPA, https://www.epa.gov/air-emissions-inventories/air-pollutant-emissions-trends-data [https://perma.cc/S39R-R2BX] (last updated Apr. 5, 2022).

NHTSA), asserting that the purpose behind his state's regulations was, and always will be, to protect the health of its citizens and environment.[174]

C. California's Position and Enforcement

States like California are better positioned to enforce vehicle emissions regulations than the federal government because localized emissions standards are more implementable and enforceable than sweeping national programs. Under the CAA, the EPA can levy penalties as steep as $37,500 per vehicle for violating its promulgated standards.[175] However, state laws made auditing companies more difficult for the EPA by creating "environmental [self-]audit privilege."[176] In 2017, 28 states enacted a form of audit protection, providing immunity from any type of penalty and making the audit privileged.[177] With the threat of pending litigation over environmental audits, the federal enforcement models are cost prohibitive for the EPA because states can interfere with the federal investigations by extending privileges to companies complying with voluntary audits to the state.[178] While the EPA may have authority to regulate emissions and demand the construction of monitoring stations, the EPA still needs a specific source's consent prior to inspecting a business, increasing the demand on time, money, and other scant resources required for the agency's investigation and enforcement activities.[179] Between the total number of vehicles rolling into the states, the number of stationary sources, state environmental audit privileges, and the deliberate

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174. *Governor Newsom Announces California Will Phase Out Gasoline-Powered Cars & Drastically Reduce Demand for Fossil Fuel in California's Fight Against Climate Change,* CA.GOV (Sept. 23, 2020), https://www.gov.ca.gov/2020/09/23/governor-newsom-announces-california-will-phase-out-gasoline-powered-cars-drastically-reduce-demand-for-fossil-fuel-in-californias-fight-against-climate-change/ [https://perma.cc/K697-XX 9L].

175. 42 U.S.C. § 7524; Memorandum from Susan Parker Bodine, EPA to the Director, Office of Civil Enforcement (Jan. 15, 2020), https://www.epa.gov/sites/default/files/2020-01/documents/2020penaltyinflationruleadjustments.pdf [https://perma.cc/3LEF-ZS7H].

176. S*tate Audit Privilege and Immunity Laws & Self-Disclosure Laws and Policies*, EPA, https://19january2021snapshot.epa.gov/compliance/state-audit-privilege-and-immunity-laws-self-disclosure-laws-and-policies_.html#audit-privilege [https://perma.cc/MY2W-XVLJ] (last visited Oct. 7, 2022).

177. *Id.*; *see also* Van Cleve & Holman, *Promise and Realty in the Enforcement of the Amended Clean Air Act—Part II: Federal Enforceability and Environmental Auditing*, 27 ENVTL. L. REP. 10151, 10161 (1997).

178. *See* Clean Water Act § 308(a)(A); Clean Air Act § 114.

179. Marshall v. Barlow's Inc., 436 U.S. 307 (1978).

process necessary to inspect sources, the EPA is trying to catch every winter snowflake with a spoon.

Allowing states to set vehicle emissions-related regulatory policies consistent with California better supports the EPA and NHTSA's purpose in reducing GHG emissions and fuel economy. First, under California's program, tax credits can be valued higher or lower given the relative impact of the mobile sources on specific nonattainment regions in each state, instead of the CAA's national GHG credits.[180] The shift to states controlling vehicle emissions, read in conjunction with section 209 of the CAA, implicates the states' Tenth Amendment rights and is more consistent with the factors supporting state authority. Vehicle emissions regulations are best left to individual states to choose how to address unique circumstances in their respective jurisdictions because state rules: (1) regulate an area indisputably within that state's sovereign power (e.g., SIPs); (2) the SAFE Rule impedes states from regulating an area legally and traditionally within state authority (e.g., the California Exception and SIPs); and (3) the text of both the EPCA and the CAA expressly directs the *states* in resolving their environmental issues.[181]

The EPA and NHTSA could argue that state and local compliance regimes interfere with a national tax credit program. Auto manufacturers may find it difficult to comply with the resulting regulatory patchwork of up to 50 different rules across the country. However, this hyperbolic defense rests entirely on an incorrect construction of the CAA. States would either follow (1) California's Exception or (2) a national program. Additionally, the argument fails to consider the long-standing precedent and the role of California's Exception as discussed in *Rocky Mountain Farmers Union v. Goldstene*.[182] When agency action represents such an abrupt change from the previously held position, the agency must "display awareness that it is changing position" and show that "there are good reasons" for the reversal.[183] Because the SAFE Rule relies on a conflicting interpretation from the express purpose of the EPCA—it is hard to say that there was "good reason" to depart from the Obama administration's established policies.[184]

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180. *See* Bipartisan Budget Act of 2015, Pub. L. No. 114-74, 129 Stat. 584, 599-602.

181. FERREY, *supra* note 86, at 165.

182. *See* 843 F. Supp. 2d 1071, 1099, 1094 (E.D. Cal. 2011).

183. F.C.C. v. Fox Television Stations, Inc., 556 U.S. 502, 515 (2009).

184. Encino Motorcars, LLC v. Navarro, 579 U.S. 211, 221 (2016).

D. State Tax Structures Create Incentives for Companies to Invest

Lastly, state enforcement and incentive programs can be lucrative for companies by incentivizing them to switch to more environmentally friendly technology.[185] In 2019 alone, Tesla sold $594 million in regulatory credits, up from $419 million in 2018.[186] Incentivizing investment in cleaner technology already took off in Europe, where Tesla and Fiat Chrysler agreed to a €1.8 billion contract for compliance standards through 2023.[187] These transactions highlight a key principle for managing state emissions regulations: specialized tax credits contracted between private industries can result in higher state GDP and can increase funding available for other statewide initiatives. More simply put, creating tax incentives that promote EV production as consumer demand increases results in more revenue for these companies as a unique market develops. Where car sales helped Tesla hit its revenue of $6.04 billion during the second quarter of 2020, the sales and transfers of credits accounted for $428 million of that number, which is greater than the company's free cash flow and four times the net profit for the quarter.[188]

VI. CONCLUSION

The EPA and NHTSA unlawfully promulgated regulations obstructing Congress's intent in drafting both the CAA and the EPCA. The NHTSA's position that the EPCA preempts California's regulation over vehicle emissions fails to respect federal standards Congress intended the agency to follow in creating a national, uniform program.[189] Where the SAFE Rule primarily focuses on saving consumers money on new car purchases, its regulations over emissions will result in greater negative impacts on EV markets, halt the revolution with electric cars and trucks, and negatively affect the environment. If states implement programs aimed at promoting EVs with zero emissions, like California's ZEV

185. Colin Beresford, *Other Automakers Paid Tesla a Record $428 Million Last Quarter*, CAR & DRIVER (July 22, 2020), https://www.caranddriver.com/news/a32346670/other-automakers-paid-tesla-record-354-million/ [https://perma.cc/4L6P-6E5X].

186. *Id.*

187. Peter Campbell, *Fiat Chrysler to Spend €1.8bn on CO2 Credits From Tesla,* FINANCIAL TIMES (May 3, 2019), https://www.ft.com/content/fd8d205e-6d6b-11e9-80c7-60ee53e6681d [https://perma.cc/AW5U-HZ3N].

188. *Id.*

189. This is based on the state regulation's indirect impact on fuel economy standards.

program, the SAFE Rule's application would empower the NHTSA (rather than the states) to regulate the alternative "electric" fuels because they indirectly impact the national fuel economy standard and average vehicle mpg—even though they use no NHTSA-regulated fuel.[190] On the other hand, the EPA incorrectly relied upon irrelevant data—such as fuel savings, energy security, oil consumption and vehicle safety—in removing California's Exception instead of focusing on public health and the "E" in the EPA—Environment.[191] Congress created a national program in 1963 when it promoted California's policy equal to its own national program, and it should stay that way.

190. The impact on the EV industry would be another grounds for finding the SAFE Rule violates settled law because its application violates the provisions under the EPCA which prevent the NHTSA from regulating alternative fuel sources, like electricity. *See* 49 U.S.C. § 32902(h)(1).

191. *See* 40 C.F.R. § 86.1818-12(h)(1) (2022).