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## State Vehicle Electrification Mandates and Federal Preemption

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# STATE VEHICLE ELECTRIFICATION MANDATES AND FEDERAL PREEMPTION

Matthew N. Metz\* and Janelle London†

## ABSTRACT

*By requiring that new vehicles sold after a certain date be electric, states can lower drivers' vehicle operating costs, boost local employment, and lower electric rates. But there's a widespread perception that states can't take advantage of these opportunities because a state vehicle electrification mandate would be preempted by federal law.*

*Not so.*

*While the Federal Clean Air Act (CAA) prohibits state regulations "relating to" the control of emissions in motor vehicles, and the Federal Energy Policy and Conservation Act (EPCA) prohibits state regulations "related to" fuel economy standards, there is a strong rationale for federal courts to reject preemption of state vehicle electrification mandates.*

*The Supreme Court has indicated repeatedly that state laws regulating a product or process "upstream" that have an effect "downstream" are not preempted by the federal law. A state law conditioning construction of nuclear power plants on adequate means for storage and disposal of nuclear waste is not preempted by a federal law regulating nuclear plant safety, although its effect is to advance nuclear plant safety. A state ban on uranium mining is not preempted by a federal law on uranium milling and tailing safety, although its effect is to advance uranium milling and tailing safety. Similarly, a state law requiring that cars run on electricity should not be preempted by federal law on emissions and fuel economy standards, although its effect is to reduce emissions and improve fuel economy. Moreover, there is no conflict between a state vehicle electrification law and the purposes of the CAA and EPCA. The purpose of the Clean Air Act is to clean the air. The relevant purpose of the Energy Policy and Conservation Act is to reduce energy demand. Neither statute has a purpose of ensuring that new vehicles have at least some emissions, nor that they continue to use gasoline.*

*This Article concludes that state vehicle electrification legislation should not be preempted. Neither the CAA nor the EPCA directly regulates how vehicles are powered. Neither statute explicitly prohibits states from mandating electrification of vehicles. And legal precedent limiting regulation of vehicles based on emissions or fuel economy*

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standards has never addressed vehicle electrification mandates.

Further, states have compelling reasons for vehicle electrification mandates that have nothing to do with regulating emissions or improving fuel economy standards. Such reasons may be sufficient to avoid preemption. The Supreme Court’s increasingly preemption-skeptical jurisprudence, as articulated in *Virginia Uranium v. Warren*, limits courts’ ability to scrutinize state motives in passing vehicle electrification statutes.

Thus, although preemption cannot be dismissed as a concern, the stage has been set for state-based vehicle electrification mandates.

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INTRODUCTION

Transportation is the largest source of carbon pollution in the United States,<sup>1</sup> most of it from burning gasoline in light duty vehicles.<sup>2</sup> Gasoline is also the largest source of air pollutants, particularly carbon monoxide and smog-forming nitrogen oxide (NOx).<sup>3</sup> More than 15,600 U.S. deaths were caused by gasoline vehicle emissions in 2015 alone.<sup>4</sup> Vehicle emissions have been linked to asthma, heart and lung disease, cancers and dementia, as well as adolescent anxiety, depression, and diminished academic performance.<sup>5</sup>

Electric vehicles (EVs) are already a viable substitute<sup>6</sup> for most gasoline-powered light-duty vehicles,<sup>7</sup> and for certain classes of heavy-duty vehicles such as transit buses.<sup>8</sup> In the San Jose, California area, about 21% of 2018 new car purchas-

1. See *Sources of Greenhouse Gas Emissions*, U.S. ENVTL. PROT. AGENCY, <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions> (last visited Nov. 26, 2019). For purposes of this Article, the term “gasoline” is used to include gasoline and diesel fuel.

2. See *Fast Facts on Transportation Greenhouse Gas Emissions*, U.S. ENVTL. PROT. AGENCY, <https://www.epa.gov/greenvehicles/fast-facts-transportation-greenhouse-gas-emissions> (last visited Nov. 26, 2019).

3. See *Pollutants and Health*, U.S. DEP’T ENERGY, [https://afdc.energy.gov/vehicles/emissions\\_pollutants.html](https://afdc.energy.gov/vehicles/emissions_pollutants.html) (last visited Nov. 26, 2019).

4. SUSAN ANENBERG ET AL., INT’L COUNCIL ON CLEAN TRANSP., A GLOBAL SNAPSHOT OF THE AIR POLLUTION-RELATED HEALTH IMPACTS OF TRANSPORTATION SECTOR EMISSIONS IN 2010 AND 2015 at 19 (2019), [https://theicct.org/sites/default/files/publications/Global\\_health\\_impacts\\_transport\\_emissions\\_2010-2015\\_20190226.pdf](https://theicct.org/sites/default/files/publications/Global_health_impacts_transport_emissions_2010-2015_20190226.pdf).

5. See *What’s So Bad About Gasoline?*, COLTURA, <https://www.coltura.org/gasfacts> (last visited Nov. 9, 2019) (collecting sources).

6. See, e.g., Kyle Hyatt & Steven Ewing, *Here’s Every Electric Vehicle on Sale in the U.S. for 2020 and its Range*, CNET (Jan. 28, 2020), <https://www.cnet.com/roadshow/news/every-electric-car-ev-range-audi-chevy-tesla/>.

7. Light duty vehicles are defined by the U.S. Federal Highway Administration as vehicles with weight under 10,000 pounds, a classification that includes passenger vehicles and light trucks. *Vehicle Weight Classes & Categories*, U.S. DEP’T ENERGY, <https://afdc.energy.gov/data/10380> (last updated June 2012); *Fleet Application for Public Transit Vehicles*, U.S. DEP’T ENERGY, <https://afdc.energy.gov/vehicle-applications/public-transit>, (last visited Nov. 26, 2019); *All Electric Vehicles*, U.S. DEP’T ENERGY, [https://afdc.energy.gov/vehicles/electric\\_basics\\_ev.html](https://afdc.energy.gov/vehicles/electric_basics_ev.html), (last visited Nov. 26, 2019).

8. See, e.g., *Heavy-Duty*, GREEN CAR CONGRESS, <https://www.greencarcongress.com/heavyduty/> (last visited Feb. 12, 2020).

es were electric.<sup>9</sup> Nationally, about 2% of new car sales were electric vehicles in 2018.<sup>10</sup>

Mass adoption of electric vehicles will significantly lower air pollution and carbon emissions.<sup>11</sup> In addition, electric vehicles provide lower vehicle operating costs<sup>12</sup> and apply downward pressure on electric rates for all utility ratepayers.<sup>13</sup>

The conflict between states pursuing more aggressive climate and air pollution control policies and a Trump Administration seeking to roll back national fuel efficiency standards and state vehicle emission requirements is moving to the courts.<sup>14</sup> The Trump Administration's proposed revocation of California's longstanding authority to 1) set stricter emissions standards than the federal government under the Clean Air Act and 2) require a rising number of zero emission vehicles, is now the subject of a challenge in the U.S. District Court for the District of Columbia brought by California and twenty-two other states, and the cities of New York and Los Angeles.<sup>15</sup> And states are advancing new climate policies, including plans to reduce carbon emissions and other air pollutants from motor vehicles, independently of the federal government.<sup>16</sup>

In the state of Washington, legislation requiring electrification of new private vehicles by 2030 is expected to be introduced in January 2021. The proposed bill, similar to a bill that was introduced in 2020,<sup>17</sup> requires that model year 2030 or

9. INT'L COUNCIL ON CLEAN TRANSP., THE SURGE OF ELECTRIC VEHICLES IN UNITED STATES CITIES 7 (June 2019), [https://theicct.org/sites/default/files/publications/ICCT\\_EV\\_surge\\_US\\_cities\\_20190610.pdf](https://theicct.org/sites/default/files/publications/ICCT_EV_surge_US_cities_20190610.pdf).

10. Loren McDonald, *US EV Sales Surpass 2% in 2018—9 EV Sales Charts*, CLEANTECHNICA (Jan. 12, 2019), <https://cleantechnica.com/2019/01/12/us-ev-sales-surpass-2-for-2018-8-more-sales-charts/>.

11. Julianne Beck & Amanda Morris, *Electric Vehicle Adoption Improves Air Quality and Climate Outlook*, PHYS.ORG (Apr. 12, 2019), <https://phys.org/news/2019-04-electric-vehicle-air-quality-climate.html>.

12. MICHAEL SIVAK & BRANDON SCHOETTLE, RELATIVE COSTS OF DRIVING ELECTRIC AND GASOLINE VEHICLES IN THE INDIVIDUAL U.S. STATES 3 (2018), <http://www.umich.edu/~umtriswt/PDF/SWT-2018-1.pdf>.

13. JASON FROST, MELISSA WHITED & AVI ALLISON, ELECTRIC VEHICLES ARE DRIVING ELECTRIC RATES DOWN 4 (2019), <https://www.synapse-energy.com/sites/default/files/EVs-Driving-Rates-Down-8-122.pdf>.

14. See, e.g., Editorial Board, *Opinion, Rather Than Compromise on Fuel-Efficiency Standards, the Trump Administration May Force Years of Litigation*, WASH. POST (July 27, 2019), [https://www.washingtonpost.com/opinions/rather-than-compromise-on-fuel-efficiency-standards-the-trump-administration-may-force-years-of-litigation/2019/07/27/bd7d3362-afda-11e9-a0c9-6d2d7818f3da\\_story.html](https://www.washingtonpost.com/opinions/rather-than-compromise-on-fuel-efficiency-standards-the-trump-administration-may-force-years-of-litigation/2019/07/27/bd7d3362-afda-11e9-a0c9-6d2d7818f3da_story.html).

15. See Complaint for Declaratory and Injunctive Relief at 4, 7, *California v. Chao*, No. 1:19-cv-02826 (D.D.C. Sept. 20, 2019), [https://oag.ca.gov/system/files/attachments/press\\_releases/California%20v.%20Chao%20complaint%20%2800000002%29.pdf](https://oag.ca.gov/system/files/attachments/press_releases/California%20v.%20Chao%20complaint%20%2800000002%29.pdf).

16. See Brad Plumer, *Blue States Roll Out Aggressive Climate Strategies. Red States Keep to the Sidelines*, N.Y. TIMES (June 21, 2019), <https://www.nytimes.com/2019/06/21/climate/states-climate-change.html>.

17. H.B. 2515, 66th Leg., Reg. Sess. (Wash. 2020). A hearing was held on the bill in the House Transportation Committee, but the bill did not advance.

later light-duty vehicles sold in the state be powered by electricity.<sup>18</sup> It asserts numerous reasons for requiring vehicle electrification, none of which relates to emissions or fuel economy standards. These reasons include: job creation; economic development; savings to Washington state consumers on vehicle maintenance and electric rates; power load balancing and energy storage for the electric grid; protection of plants, fish, and wildlife from polluted stormwater runoff; and avoidance of toxic vapor releases and soil and groundwater contamination.<sup>19</sup> None of these reasons conflicts with the purposes of the Federal Clean Air Act<sup>20</sup> or the Energy Policy and Conservation Act.<sup>21</sup>

This Article analyzes the proposed Washington legislation to explore the broader question of whether a state (or a political subdivision of a state such as an air quality management district, county, or city) could enact vehicle electrification laws, regulations, or local rules that could withstand a preemption challenge under the CAA and EPCA.<sup>22</sup>

A preemption challenge to a law such as the proposed Washington vehicle electrification mandate is a virtual certainty.<sup>23</sup> The legal issues involved in a preemption challenge would be a case of first impression—no state has previously enacted a 100% vehicle electrification mandate.<sup>24</sup> Proponents of preemption would likely base their case on language in CAA § 209(a), prohibiting state regulation

18. *Draft bill concerning the electrification of transportation* (2020), <https://tinyurl.com/WAEVBILL2021> (on file with authors).

19. *Id.*

20. *Cf.* 42 U.S.C. §§ 7401(a)(3), (b)(1), (c) (2018).

21. 42 U.S.C. § 6201 (2018).

22. The state of California alone has been given the explicit ability to set stricter vehicle emissions standards than those set by federal law. California was written into the Clean Air Act in a way that allowed the state to request a waiver from the administrator of the EPA to curtail tailpipe emissions more restrictively than what the federal government allows. Accordingly, the EPA administrator is required by law to grant the waiver to California if the state's emissions standards are "at least as protective of public health and welfare as applicable Federal standards." *See* 42 U.S.C. § 7543(b) (2012). The Trump Administration has moved to revoke that ability. Ryan Beene et. al., *Trump Moving Forward to End California's Authority to Set Clean-Air Standards, Mandate Electric-Car Sales*, L.A. TIMES (July 23, 2018), <https://www.latimes.com/business/la-fi-trump-california-clean-air-20180723-story.html>.

23. *See* James B. Slaughter & James M. Auslander, *Preemption Litigation Strategies Under Environmental Law*, 22 NAT. RES. & ENV'T 18, 18-19 ("Environmental law is a rich field for preemption disputes . . .").

24. Ten states have joined California's Zero Emissions Vehicles program, enacted pursuant to the waiver provided by the Clean Air Act section 209(a). However, that program is different from a vehicle electrification mandate, in that it puts the onus on automakers to earn a certain number of credits for stocking zero emissions vehicles (usually electric vehicles) at dealerships in the state, or purchase excess credits from another automaker, or pay a fine. Currently the credit requirement amounts to about 2.5% of the automaker's vehicles, and that figure rises to about 8% by 2025. *See generally What Is ZEV?*, UNION CONCERNED SCIENTISTS (Aug. 7, 2012), <https://www.ucsusa.org/resources/what-zev> (last updated Sept. 12, 2019).

“relating to the control of emissions” in motor vehicles,<sup>25</sup> and on an EPCA provision prohibiting state regulation “related to” fuel economy standards.<sup>26</sup>

There are multiple ways courts could uphold a state vehicle electrification mandate consistent with existing preemption precedent. The CAA regulates vehicle emissions; EPCA regulates “fuel economy standards.” As described in detail below, defenders of the legislation can point to its lack of reference to vehicle emissions or fuel economy standards, its basis in strong non-emissions, non-fuel-economy grounds for electrification, the broad authority states have over in-state electricity regulation, and growing judicial disfavor for preemption.

This Article concludes that there is a path for the Washington vehicle electrification mandate to avoid preemption under existing precedent. Nonetheless, the outcome of a preemption challenge to the proposed Washington legislation is unclear. Preemption doctrine is highly case-specific. A ruling on preemption would likely turn on the extent to which a court finds conflict between the Washington legislation and the CAA and EPCA. Much will depend on judicial interpretation of the breadth to be accorded to the “related to” preemption language in the CAA and EPCA.<sup>27</sup>

The success of a preemption challenge will also hinge on the ideological bent of the court considering it and the perceived urgency to address the climate crisis at the time that the preemption challenge is considered. The Ninth Circuit, where the challenge to Washington legislation would initially be reviewed, has tended to be sympathetic to pro-climate legislation and resistant to federal preemption of environmental statutes.<sup>28</sup> However, with the appointments to the Ninth Circuit bench made by the Trump administration, that may be changing.<sup>29</sup>

This Article proceeds in three Parts. Part I introduces the concept of vehicle electrification legislation in the context of the Washington bill and details existing vehicle electrification efforts internationally and in the U.S. Part II examines the CAA and EPCA, the Washington bill and relevant preemption case law, and concludes that federal statutes and precedent do not require preemption of state vehicle electrification mandates. Part III examines preemption through the lens of the Supreme Court’s evolving narrow, text-based, and formalist preemption jurisprudence, as recently articulated in *Virginia Uranium v. Warren*, and concludes that ex-

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25. 42 U.S.C. § 7543(a).

26. 49 U.S.C. § 32919(a) (2012).

27. See 42 U.S.C. § 7543(a); 49 U.S.C. § 32919(a).

28. See Ryan Ichinaga, *State Activism in the Movement to Conserve Sharks: The Ninth Circuit’s Guidance on Preemption and the Magnuson-Stevens Act in “Chinatown Neighborhood Ass’n v. Harris”*, 46 ENVTL L. 679, 704-05 (2016).

29. See Susannah Luthi, *How Trump is Filling the Liberal 9th Circuit With Conservatives*, POLITICO (Dec. 27, 2019), <https://www.politico.com/news/2019/12/22/trump-judges-9th-circuit-appeals-court-088833>.

isting federal legislation should not preempt vehicle electrification mandates under state law.

## I. OVERVIEW OF VEHICLE ELECTRIFICATION MANDATES

### A. *The Need for Vehicle Electrification Policy*

Gasoline is the single largest source of carbon dioxide (CO<sub>2</sub>) pollution in the United States.<sup>30</sup> In 2018, U.S. gasoline and diesel consumption for transportation resulted in emissions of about 1,600 million metric tons of CO<sub>2</sub>, roughly two-thirds of which was from gasoline.<sup>31</sup> Gasoline and diesel emissions constituted 81% of total U.S. transportation sector CO<sub>2</sub> emissions and 30% of total U.S. energy-related CO<sub>2</sub> emissions.<sup>32</sup> Gasoline usage has reached an all-time high of 3.4 billion barrels per year from 2016 to 2018.<sup>33</sup>

Electric vehicles (EVs) are capable of replacing gasoline-powered cars as the predominant mode of mobility and drastically lowering transportation-sector CO<sub>2</sub> emissions.<sup>34</sup> Thanks to plummeting costs of wind and solar power, replacement of traditional fuels with renewable sources is more practicable than ever.<sup>35</sup> EVs offer superior performance to comparable gas-powered vehicles.<sup>36</sup> Some EV models are already at cost parity with comparable gasoline vehicles on a lifetime cost of ownership basis—that is, accounting not only for the purchase price but also savings in fuel costs and maintenance over the lifetime of the vehicle.<sup>37</sup> Sticker prices for EVs

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30. *Where Greenhouse Gases Come From*, U.S. ENERGY INFO. ADMIN., [https://www.eia.gov/energyexplained/index.php?page=environment\\_where\\_ghg\\_come\\_from](https://www.eia.gov/energyexplained/index.php?page=environment_where_ghg_come_from) (last updated July 20, 2018).

31. *How Much Carbon Dioxide Is Produced from U.S. Gasoline and Diesel Fuel Consumption?*, U.S. ENERGY INFO. ADMIN., <https://www.eia.gov/tools/faqs/faq.php?id=307&t=11> (last updated May 15, 2019).

32. *Id.*

33. *Petroleum & Other Liquids: Product Supplied*, U.S. ENERGY INFO. ADMIN. (July 31, 2019), [https://www.eia.gov/dnav/pet/pet\\_cons\\_psup\\_a\\_EPM0F\\_VPP\\_mbb1\\_a.htm](https://www.eia.gov/dnav/pet/pet_cons_psup_a_EPM0F_VPP_mbb1_a.htm).

34. *See generally How Clean Is Your Electric Vehicle?*, UNION CONCERNED SCIENTISTS (Aug. 25, 2015), <https://www.ucsusa.org/clean-vehicles/electric-vehicles/ev-emissions-tool>.

35. *See* Megan Mahajan, *Plunging Prices Mean Building New Renewable Energy Is Cheaper Than Running Existing Coal*, FORBES (Dec. 3, 2018), <https://www.forbes.com/sites/energyinnovation/2018/12/03/plunging-prices-mean-building-new-renewable-energy-is-cheaper-than-running-existing-coal/>.

36. IDAHO NAT'L LAB., *HOW DO GASOLINE & ELECTRIC VEHICLES COMPARE?* at 2, <https://avt.inl.gov/sites/default/files/pdf/fsev/compare.pdf>.

37. NIC LUTSEY & MICHAEL NICHOLAS, *UPDATE ON ELECTRIC VEHICLE COSTS IN THE UNITED STATES THROUGH 2030* at 10 (Int'l Council on Clean Transp., Working Paper No. 2019-06, 2019), [https://www.theicct.org/sites/default/files/publications/EV\\_cost\\_2020\\_2030\\_20190401.pdf](https://www.theicct.org/sites/default/files/publications/EV_cost_2020_2030_20190401.pdf).

are expected to reach cost parity with comparable gasoline vehicles by the mid-2020s,<sup>38</sup> and in several vehicle segments are already lower.<sup>39</sup>

Recent studies have also calculated powerful economic benefits of widespread vehicle electrification unrelated to vehicle emissions.<sup>40</sup> New York, for example, could realize \$75 billion in net present value from vehicle electrification in a scenario in which electric vehicle penetration reaches 27% of all registered vehicles by 2030 and 92% by 2050.<sup>41</sup> \$34.1 billion of these benefits would accrue to EV owners in the form of reduced annual operating costs, and \$24.3 billion would accrue to electric utility customers in the form of reduced electric bills.<sup>42</sup> Other non-emissions-related benefits of EVs include using locally generated electricity to power automobiles,<sup>43</sup> retaining money in-state that would normally be spent on gasoline,<sup>44</sup> providing load balancing,<sup>45</sup> storage and resilience<sup>46</sup> resources to the

38. Nathaniel Bullard, *Electric Car Price Tag Shrinks Along with Battery Cost*, BLOOMBERGNEF (Apr. 23, 2019), <https://about.bnef.com/blog/bullard-electric-car-price-tag-shrinks-along-battery-cost/>.

39. *Supply: Model Availability and Price Discrepancy Between EVs and ICE Vehicles Remain a Top Hurdle To Mass Adoption in the US*, EVADOPTION (May 19, 2019), <https://evadoption.com/supply-model-availability-and-price-discrepancy-between-evs-and-ice-vehicles-remain-a-top-hurdle-to-mass-adoption/>.

40. See, e.g., DANA LOWELL, BRIAN JONES & DAVID SEAMONDS, *ELECTRIC VEHICLE COST-BENEFIT ANALYSIS 21* (2016), [https://mjbradley.com/sites/default/files/NY\\_PEV\\_CB\\_Analysis\\_FINAL.pdf](https://mjbradley.com/sites/default/files/NY_PEV_CB_Analysis_FINAL.pdf).

41. *Id.* at 5-6.

42. *Id.* Electric vehicles tend to charge overnight when there is spare capacity on the grid. They result in increased utilization of existing electrical infrastructure with relatively little additional marginal cost. As such, EVs increase utility revenues more than they increase utility costs, leading to downward pressure on rates. JASON FROST, MELISSA WHITED, & AVI ALLISON, SYNAPSE ENERGY ECON. INC., *ELECTRIC VEHICLES ARE DRIVING ELECTRIC RATES DOWN 3-4* (2019), <https://www.synapse-energy.com/sites/default/files/EV-Impacts-June-2019-18-122.pdf>.

43. Michela Longo, Federica Foadelli & Wahiba Yaici, *Electric Vehicles Integrated with Renewable Energy Sources for Sustainable Mobility*, in *NEW TRENDS IN ELECTRICAL VEHICLE POWERTRAINS* 203, 205 (Luis Romeral Martinez & Miguel Delgado Prieto eds., 2019), <https://www.intechopen.com/books/new-trends-in-electrical-vehicle-powertrains/electric-vehicles-integrated-with-renewable-energy-sources-for-sustainable-mobility>.

44. See NEXT10, *CLEAN TRANSPORTATION: AN ECONOMIC ASSESSMENT OF MORE INCLUSIVE VEHICLE ELECTRIFICATION IN CALIFORNIA* 46-47, <https://www.next10.org/sites/default/files/2020-01/clean-transportation-ev-benefits-final.pdf>; see also JAMES J. WINEBRAKE, ERIN H. GREEN & EDWARD CARR, *PLUG-IN ELECTRIC VEHICLES: ECONOMIC IMPACTS AND EMPLOYMENT GROWTH: PRELIMINARY FINAL REPORT 10-14* (2017), <https://caletc.com/wp-content/uploads/2019/05/EERA-PEV-Economic-Impacts-and-Employment-Growth.pdf>.

45. See generally JEFFERY GREENBLATT ET AL., LAWRENCE BERKELEY NAT'L LAB., *QUANTIFYING THE POTENTIAL OF ELECTRIC VEHICLES TO PROVIDE ELECTRIC GRID BENEFITS TO THE MISO AREA*, <https://cdn.misoenergy.org/Quantifying%20the%20Potential%20of%20Electric%20Vehicles%20to%20Provide%20Electric%20Grid%20Benefits%20in%20the%20MISO%20Area354192.pdf> (last visited May 11, 2020).

46. ELEC. ADVISORY COMM., *ENHANCING GRID RESILIENCE WITH INTEGRATED STORAGE FROM ELECTRIC VEHICLES* (June 2018), [https://www.energy.gov/sites/prod/files/2018/06/f53/EAC\\_Enhancing%20Grid%20Resilience%20with%20Integrated%20Storage%20from%20EVs%2028June%202018%29.pdf](https://www.energy.gov/sites/prod/files/2018/06/f53/EAC_Enhancing%20Grid%20Resilience%20with%20Integrated%20Storage%20from%20EVs%2028June%202018%29.pdf).

electric grid, spurring economic development in new technologies,<sup>47</sup> creating new jobs directly and indirectly related to transportation electrification,<sup>48</sup> tempering oil lobby influence,<sup>49</sup> protecting natural habitats by reducing oil exploration and spills,<sup>50</sup> reducing noise pollution,<sup>51</sup> and reducing volumes of petroleum leaked from underground storage tanks and motor vehicles.<sup>52</sup>

Despite these benefits, electric car sales represent only about 2% of all U.S. new car sales<sup>53</sup>, with most of those sales in 2019 coming from one manufacturer: Tesla.<sup>54</sup> A handful of factors have prevented a more rapid uptake of electric vehicles: higher sticker price, consumer anxiety about vehicle range, insufficient charging infrastructure, and charging speed.<sup>55</sup> Additional factors are consumer comfort with gasoline vehicles,<sup>56</sup> a shortage of electric vehicle models in key categories,<sup>57</sup> and poor sales and advertising efforts by manufacturers and dealers.<sup>58</sup>

Policies designed to accelerate the transition to EVs can be helpful, including EV purchase/lease incentive programs (especially if targeted at low- and moderate-

47. See Longo, Foiadelli & Yaïci, *supra* note 43, at 209-18.

48. See NEXT10, *supra* note 44, at 37-38; Ingrid Malmgren, *Quantifying the Societal Benefits of Electric Vehicles*, 721 WORLD ELEC. VEHICLE J. 996, 1001 (2016).

49. See Michael J. Mishak, *Big Oil's Grip on California*, REVEAL (Mar. 1, 2017), <https://www.revealnews.org/article/big-oils-grip-on-california/>.

50. See *The Hidden Costs of Fossil Fuels*, UNION OF CONCERNED SCIENTISTS (Aug. 30, 2016), <https://www.ucsusa.org/clean-energy/coal-and-other-fossil-fuels/hidden-cost-of-fossils>.

51. See Hector Campello-Vicente et al., *The Effect of Electric Vehicles on Urban Noise Maps*, 116 APPLIED ACOUSTICS 59, 64 (2017).

52. See Hilary Nixon & Jean-Daniel Saphores, *Impacts of Motor Vehicle Operation on Water Quality in the US – Cleanup Costs and Policies*, 12 TRANSP. RES. PART D: TRANSPORT & ENV'T 564 (2007), <https://doi.org/10.1016/j.trd.2007.08.002>.

53. Russ Mitchell, *Car Buyers Shun Electric Vehicles Not Named Tesla. Are Carmakers Driving Off a Cliff?*, L.A. TIMES (Jan. 17, 2020), <https://www.latimes.com/business/story/2020-01-17/ev-sales-fizzle>.

54. Zachary Shahan, *Tesla Gobbled Up 78% of US Electric Vehicle Sales in 2019*, CLEAN TECHNICA (Jan. 16, 2020), <https://cleantechnica.com/2020/01/16/tesla-gobbled-up-81-of-us-electric-vehicle-sales-in-2019/>.

55. CB INSIGHTS, *THE RACE FOR THE ELECTRIC CAR* 16-21 (2019), [https://www.cbinsights.com/reports/CB-Insights\\_Electric-Car-Race.pdf?utm\\_campaign=electric-car-race\\_2019-05&utm\\_medium=email&\\_hsenc=p2ANqtz\\_wMLvy63e8WqeghQLb2bkSJw6bEYycPqXl\\_DXe65I1pd8Bs17D0x4iEGY2-beB6wHwqFgn3u1rfO5ItfpNB7tW7xT42\\_XYV5OfA6jBVi\\_WzZz4ke4&\\_hsmi=73210674&utm\\_source=hs\\_automation&utm\\_content=73210674&hsCtaTracking=a2e34b17-025e-4b46-978c-7994f556a087%7C31d25a0a-0003-41a4-9595-67363ac5000c](https://www.cbinsights.com/reports/CB-Insights_Electric-Car-Race.pdf?utm_campaign=electric-car-race_2019-05&utm_medium=email&_hsenc=p2ANqtz_wMLvy63e8WqeghQLb2bkSJw6bEYycPqXl_DXe65I1pd8Bs17D0x4iEGY2-beB6wHwqFgn3u1rfO5ItfpNB7tW7xT42_XYV5OfA6jBVi_WzZz4ke4&_hsmi=73210674&utm_source=hs_automation&utm_content=73210674&hsCtaTracking=a2e34b17-025e-4b46-978c-7994f556a087%7C31d25a0a-0003-41a4-9595-67363ac5000c).

56. *Id.*

57. However, concern about model availability is diminishing as automakers have plans for about 400 electric vehicles models to enter the market by 2025. See MCKINSEY & CO., *THE ROAD AHEAD FOR E-MOBILITY* 4, 14 (Jan. 2020), <https://www.mckinsey.com/~/media/mckinsey/industries/automotive%20and%20assembly/our%20insights/the%20road%20ahead%20for%20e%20mobility/the-road-ahead-for-e-mobility.ashx>.

58. SIERRA CLUB, *A NATIONWIDE STUDY OF THE ELECTRIC VEHICLE SHOPPING EXPERIENCE* 9 (Nov. 2019), [https://www.sierraclub.org/sites/www.sierraclub.org/files/press-room/2153%20Rev%20Up%20Report%202019\\_3\\_web.pdf](https://www.sierraclub.org/sites/www.sierraclub.org/files/press-room/2153%20Rev%20Up%20Report%202019_3_web.pdf).

income consumers)<sup>59</sup> and carbon taxes. But EV sales incentives, in which the government pays a portion of the vehicle purchase price, can burden a state's budget,<sup>60</sup> and carbon taxes have failed to gain political traction at the federal<sup>61</sup> or state<sup>62</sup> levels. Most importantly, these policies are unlikely to be sufficient to spur investment at the rate necessary for rapid transition to EVs, nor to assure the drastic reduction in gasoline use necessary to avert the worst impacts of the climate crisis.<sup>63</sup>

The long-term sales trend for EVs is the subject of much debate. The Edison Foundation, using projections from five independent forecasts, developed a consensus forecast that EV sales will account for about 22% of new car sales in the U.S. by 2030.<sup>64</sup> Given that there are about 256 million passenger vehicles on U.S. roads,<sup>65</sup> and that their average age is 11.5 years,<sup>66</sup> more than 90% of cars on the road would still be powered by gasoline in 2030 in the event that the consensus EV growth forecast is accurate.

So what can be done? Many countries are announcing plans to implement gasoline vehicle phaseout policies.<sup>67</sup> A gasoline vehicle phaseout requires only sales of zero emissions vehicles, or prohibits sales of new gasoline-powered vehicles, after a date certain—for instance, it might prohibit sales of new gasoline-powered cars beginning with model year 2030. Battery electric vehicles and hydrogen fuel cell electric vehicles are the most common types of vehicles other than vehicles with tailpipe emissions that typically run on gasoline or diesel. In countries announcing plans to phase out gasoline vehicles, the plan is that zero-emission elec-

59. UC DAVIS, IMPACT OF THE CLEAN VEHICLE REBATE PROJECT'S INCREASED REBATES FOR LOW- AND MODERATE-INCOME INDIVIDUALS ON CALIFORNIA'S ZEV MARKET 4-6 (May 2019), [https://policyinstitute.ucdavis.edu/wp-content/uploads/CVRRP\\_Rebates\\_0519.pdf](https://policyinstitute.ucdavis.edu/wp-content/uploads/CVRRP_Rebates_0519.pdf).

60. See, e.g., Michael J. Coren, *A California Program to Put the Masses in Electric Cars May Cost \$14 Billion*, QUARTZ (Dec. 21, 2018), <https://qz.com/1499245/ev-price/>.

61. Cf. Miranda Green, *Carbon Tax Shows New Signs of Life in Congress*, HILL (July 26, 2019), <https://thehill.com/policy/energy-environment/454819-carbon-tax-shows-new-signs-of-life-in-congress>.

62. David Roberts, *Washington Votes No on a Carbon Tax—Again*, VOX (Sept. 28, 2018), <https://www.vox.com/energy-and-environment/2018/9/28/17899804/washington-1631-results-carbon-fee-green-new-deal>.

63. See Joeri Rogelj et al., *Mitigation Pathways Compatible with 1.5°C in the Context of Sustainable Development*, in GLOBAL WARMING OF 1.5 °C at 93, 95 (Valerie Masson-Delmotte et al. eds., 2018) (describing IPCC position that a 45% CO<sub>2</sub> decline by 2030 relative to 2010 is needed to keep warming within 1.5 °C).

64. ADAM COOPER & KELLEN SCHEFTER, EDISON FOUND. INST. FOR ELEC. INNOVATION & EDISON ELEC. INST., REPORT: ELECTRIC VEHICLE SALES FORECAST AND THE CHARGING INFRASTRUCTURE REQUIRED THROUGH 2030 (2018), [https://www.edisonfoundation.net/iei/publications/Documents/IEI\\_EEI%20EV%20Forecast%20Report\\_Nov2018.pdf](https://www.edisonfoundation.net/iei/publications/Documents/IEI_EEI%20EV%20Forecast%20Report_Nov2018.pdf).

65. *Number of U.S. Aircraft, Vehicles, Vessels, and Other Conveyances*, U.S. DEP'T TRANSP.: BUREAU TRANSP. STAT. (May 30, 2019), <https://www.bts.gov/content/number-us-aircraft-vehicles-vessels-and-other-conveyances>.

66. Scott Vaughan, *Average Lifespan for U.S. Vehicles*, BERLA (Nov. 16, 2016), <https://berla.co/average-us-vehicle-lifespan/>.

67. See *supra* Section I.B.

tric vehicles will take their place,<sup>68</sup> making these gasoline vehicle phaseout policies essentially vehicle electrification mandates.

Vehicle electrification mandates are prospective; cars manufactured prior to the phaseout date are not affected. Such mandates allow for industrial planning and accommodate a transition period. They provide a stronger policy that's more certain to achieve the intended result than relying on market forces alone. And they are becoming popular around the world. Zero emission vehicle requirements have emerged in more than fifteen countries as a preferred strategy to accelerate and assure the transition away from gasoline.<sup>69</sup>

As discussed below, vehicle electrification mandates are an attractive policy option for the U.S. as well, because they provide the market certainty needed to accelerate large, long-term investment in vehicle and battery technology, EV charging infrastructure, the electrical grid, and public awareness. Vehicle electrification mandates will shift investment away from oil production and further development of gas-powered vehicles.

### B. *Implementation of Vehicle Electrification Policies Abroad*

Eighteen countries or regions are implementing or planning mandates to speed the trend toward vehicle electrification. While the terms of these policies vary, they all function by restricting the sale of new gasoline-powered cars, and most of them contemplate a 2030 target date.

Countries or regions have announced plans, policies, or laws to phase out sales of new gasoline cars by 2025 (Norway), 2030 (Denmark, Germany, Iceland, India, Ireland, Israel, Netherlands, Slovenia, and Sweden), or 2040 (British Columbia, Egypt, France, Portugal, Spain, Sri Lanka, Taiwan, and the United Kingdom).<sup>70</sup> In Norway, *already* more than 42% of all new cars sold are electric.<sup>71</sup> China, the world's largest market, is considering a ban on fossil fuel vehicles<sup>72</sup> and is imple-

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68. See, e.g., Magdalena Dugdale, *European Countries Banning Fossil Fuels and Switching to Electric*, ROAD TRAFFIC TECH. (Aug. 1, 2018), <https://www.roadtraffic-technology.com/features/european-countries-banning-fossil-fuel-cars/>. For the purposes of this article, it is assumed that where gasoline vehicles are phased out, electric ones will take their place.

69. See *infra* notes 70-73 and accompanying text.

70. *Gasoline Vehicle Phaseout Advances Around the World*, COLTURA, <https://www.coltura.org/world-gasoline-phaseouts> (last visited Aug. 5, 2019).

71. See Mikael Holter, *Tesla Record Pushes Norway's Share of Electric Car Sales to 42%*, BLOOMBERG (Jan. 3, 2020), <https://www.bloomberg.com/news/articles/2020-01-03/tesla-record-pushes-norway-s-share-of-electric-car-sales-to-42>.

72. See, e.g., Jill Shen, *After False Starts, China Reaffirms Plans to Phase Out Fossil Fuels*, TECHNODÉ (Aug. 22, 2019), <https://technode.com/2019/08/22/miit-ban-fossil-fuel-update/>.

menting restrictions on new gasoline cars in other ways, such as by applying strict vehicle licensing quotas.<sup>73</sup>

### C. Rationales for Vehicle Electrification Policy

#### 1. Market Certainty Rationale

Merely selling more electric cars isn't enough to sustain a robust electric vehicle-based transportation system. Huge public and private investments in vehicles, the electric grid, and charging infrastructure are also needed to provide the wide choice of vehicle models and ability to travel long distances that drivers expect.

A vehicle electrification mandate creates the critical mass of electric vehicles on the road required to ensure returns from investing in electric vehicle technology and charging. Electric vehicles and electric-vehicle technology are subject to network effects<sup>74</sup>—an economic phenomenon in which the value of a particular good depends on the extent of adoption of that good by others.<sup>75</sup> Network effects are particularly strong for goods that depend on an underlying infrastructure.<sup>76</sup> For example, an individual owner might be able to install a private charging station at her home, but will not be able to travel past her vehicle's range if there are no public charging stations available on the road. Likewise, it makes little economic sense for an owner of gas stations or parking lots to install charging stations across its properties without the certainty that there will be customers to use them. Network effects explain why the electric automaker Tesla decided to allow other manufacturers to use its patented technology.<sup>77</sup> The advantages of owning a Tesla grow as the overall electric car market and associated charging infrastructure grows.

73. E.g., Samuel Shen & Adam Jourdan, *Beijing Slashes Car Sales Quota in Anti-pollution Drive*, SCI. AM. (Nov. 5, 2019), <https://www.scientificamerican.com/article/beijing-slashes-car-sales-quota-to-cut-pollution/>.

74. E.g., Shanjun Li et al., *The Market for Electric Vehicles: Indirect Network Effects and Policy Design*, 4 J. ASS'N ENVTL. & RESOURCE ECONOMISTS 89 (2017) (demonstrating network effects in electric-vehicle markets and proposing policy interventions based on analysis); Zhe Yua et al., *Market Dynamics and Indirect Network Effects in Electric Vehicle Diffusion*, 47 TRANSP. RES. PART D 336 (2016) (observing, among other things, that the free market results in underinvestment in electric vehicles).

75. See generally Michael L. Katz & Carl Shapiro, *Systems Competition and Network Effects*, 8 J. ECON. PERSP. 93, 93-97 (1994).

76. Network effects were a strong contributor to the triumph of the VCR over the Betamax in the 1970s and 1980s, despite the Betamax arguably being the superior technology. See, e.g., James Currier, *The Network Effects Manual: 13 Different Network Effects (and Counting)*, MEDIUM (Jan. 9, 2018), <https://medium.com/@nfx/the-network-effects-manual-13-different-network-effects-and-counting-a3e07b23017d>. Telephones provide another good illustration of network effects. One phone by itself is not a particularly useful device. Greater adoption of telephones both makes each individual phone more useful and spreads the cost of telephone lines and other supporting infrastructure across more users.

77. See Elon Musk, *All Our Patent Are Belong to You*, TESLA (June 12, 2014), <https://www.tesla.com/blog/all-our-patent-are-belong-you>.

Legal and market uncertainty, then, is a major sticking point in the transition to an all-electric system. A vehicle electrification policy would provide certainty to key market participants that a fully-electric new vehicle market would reward their investment.

Without the certainty created by an electrification mandate, market participants would be likely to hedge their bets. Automakers might question the size of the electric vehicle market and whether the charging infrastructure buildout will be sufficient to power EVs. Landlords might hesitate to install charging infrastructure, concerned about whether there would be enough EV drivers to justify the cost. And utilities might delay grid upgrades for the same reason. This hedging could significantly delay growth of the electric vehicle industry, locking in decades of dependence on gasoline.<sup>78</sup>

With a vehicle electrification mandate in place, automakers would be able to make multi-billion-dollar investments in the design of new electric vehicles with the confidence that the entire vehicle market would become electric. Commercial landlords could make the substantial investments necessary to make charging available at apartment buildings, businesses, and shopping centers, knowing that all new vehicle owners would be potential customers. Utility companies could invest in upgrading the grid, knowing that enormous new demand from electric vehicles would be coming.

## 2. Climate & Public Health Rationale

There is also a need to mandate vehicle electrification for climate and public health reasons. The carbon budget available to maintain global warming under 1.5 degrees Celsius is rapidly shrinking.<sup>79</sup> Every gallon of gasoline burned uses up twenty pounds of that budget.<sup>80</sup> Given the limited carbon budget, new vehicles that necessarily use gasoline should be proscribed. This is especially true when a cleaner, cheaper, better-performing, and more reliable alternative is available.

As for public health, it is reasonable to restrict vehicles that burn gasoline, which is known to release toxic pollutants including carbon monoxide, smog-

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78. See, e.g., David LaGrand, Opinion, *Infrastructure Needed to Spread Electric Cars*, DETROIT NEWS (Sept. 3, 2019), <https://www.detroitnews.com/story/opinion/2019/09/04/opinion-infrastructure-needed-spread-electric-cars/2196681001/>; Michael Roeth, *The Chicken and the Egg of Electric Vehicle Charging*, FLEETOWNER (Mar. 13, 2019), <https://www.fleetowner.com/ideaxchange/chicken-and-egg-electric-vehicle-charging>.

79. See *That's How Fast the Carbon Clock is Ticking*, MCC, <https://www.mcc-berlin.net/en/research/co2-budget.html> (last visited Feb. 13, 2020); Christiana Figueres et al., *Emissions Are Still Rising: Ramp Up the Cuts*, 564 NATURE 27 (2018); Zeke Hausfather, *Analysis: How Much Carbon Budget Is Left to Limit Global Warming to 1.5C?* CARBON BRIEF (2018), <https://www.carbonbrief.org/analysis-how-much-carbon-budget-is-left-to-limit-global-warming-to-1-5c>. A "carbon budget" is an upper limit of CO2 emissions in order to remain below a specific global temperature target. *Id.*

80. *How Can a Gallon of Gasoline Produce 20 Pounds of Carbon Dioxide?*, FUELECONOMY.GOV, [https://www.fueleconomy.gov/feg/contentIncludes/co2\\_inc.htm](https://www.fueleconomy.gov/feg/contentIncludes/co2_inc.htm) (last visited Nov. 1, 2019).

causing volatile organic compounds and nitrogen oxides, sulfur dioxides, formaldehyde and benzene into the air.<sup>81</sup> Smoking in public is restricted because of the health influences on third parties,<sup>82</sup> and use of hazardous chemicals is restricted where safer alternatives are available.<sup>83</sup>

### 3. Budgetary Rationale

Vehicle electrification mandates require almost no government expenditures, unlike other electric vehicle incentive policies such as tax credits, subsidies, and government-funded infrastructure programs, which can be difficult to implement in the face of tight government budgets, public resistance to new taxes, and equity concerns.<sup>84</sup>

Opponents may contend that a vehicle electrification mandate would increase costs to consumers by limiting consumer choice and requiring purchase of particular kinds of vehicles.<sup>85</sup> But electric vehicle selection is growing rapidly.<sup>86</sup> Electric vehicles are already attaining cost parity on a lifetime basis, and economies of scale and network effects mean that such costs will drop further upon a vehicle electrification mandate going into effect.<sup>87</sup> To the extent that there are costs associated with the mandate, they would likely be borne primarily by the auto industry, which has historically maintained profitability while advancing automobile technology.<sup>88</sup>

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81. See *Pollutants and Health*, ALTERNATIVE FUELS DATA CENTER, [https://afdc.energy.gov/vehicles/emissions\\_pollutants.html](https://afdc.energy.gov/vehicles/emissions_pollutants.html) (last visited Apr. 18, 2020).

82. *Smokefree Policies Improve Health*, CTR. FOR DISEASE CONTROL, [https://www.cdc.gov/tobacco/data\\_statistics/fact\\_sheets/secondhand\\_smoke/protection/improve\\_health/index.htm](https://www.cdc.gov/tobacco/data_statistics/fact_sheets/secondhand_smoke/protection/improve_health/index.htm) (last updated Jan. 17, 2018).

83. For instance, although chlorofluorocarbons (CFCs) are excellent refrigerants, they have been subject to phaseout legislation in the US and internationally. See generally *Chlorofluorocarbons (CFCs)*, EARTH SYS. RES. LAB., <https://www.esrl.noaa.gov/gmd/hats/publicn/elkins/cfcs.html> (last visited Aug. 5, 2019). And CFCs were themselves a safer substitute for previous refrigerants. *Id.*

84. See, e.g., Bradley Berman, *Washington Times Equates EV Credits With Tax Cuts for the Rich, Ignoring Oil Subsidies*, ELECTREK (Dec. 9, 2019), <https://electrek.co/2019/12/09/washington-times-equates-ev-credits-with-tax-cuts-for-the-rich-ignoring-oil-subsidies/>.

85. See, e.g., FREEDOM TO DRIVE COALITION, <http://freedomtodrive.org/> (last visited Oct. 13, 2019).

86. See MCKINSEY & CO., *supra* note 57, at 4-5.

87. See Lutsey & Nicholas, *supra* note 37, at 6.

88. *Seven Global Car Makers KPIs Part 3: Profitability*, MOTOR MONITOR, <https://lga-consultants.com/seven-global-car-makers-kpis-part-3-profitability/> (last visited Aug. 5, 2019).

#### 4. Grid Services Rationale

EV batteries can serve as an important power balancing and storage resource for the electrical grid.<sup>89</sup> With controlled charging, EVs can charge at times when renewable power typically surges on the grid, avoiding curtailment or waste.<sup>90</sup>

Technology advances are enabling EVs to supply power to the grid when power demand is high, or when power outages occur,<sup>91</sup> such that mass vehicle electrification can provide flexible load balancing<sup>92</sup> and resilience<sup>93</sup> to the grid.

#### 5. Competitive Rationale

The U.S. auto industry's two major crises both occurred after eras in which it failed to develop optimally fuel-efficient vehicles. In the 1970s and 1980s, the U.S. auto industry suffered as fuel-efficient Japanese imports gained substantial market share.<sup>94</sup> Then, in the mid-2000s, the industry faced bankruptcy as its SUV-heavy, fuel-inefficient offerings were a poor match for rising gas prices and the 2008 recession.<sup>95</sup>

China, India, and Europe, which combined constitute the majority of the world's automotive market, are signaling phaseouts and other aggressive policies to hasten the transition to EVs.<sup>96</sup> If the U.S. auto industry resists this trend, it risks falling behind the rest of the world in electric vehicle technology and sales. By assuring a strong domestic market for EV sales, a vehicle electrification policy will provide major U.S. automakers with a large and guaranteed domestic market for their EVs and enable them to even the playing field with their principal competitors.

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89. GREENBLATT ET AL., *supra* note 45, at 5.

90. See Julia K. Szinai et al., *Reduced Grid Operating Costs and Renewable Energy Curtailment with Electric Vehicle Charge Management*, 136 ENERGY POL'Y 2020, at 1.

91. ELEC. ADVISORY COMM., *supra* note 46.

92. See Szinai et al., *supra* note 91; see also STEPHANIE MORSE & KAREN GLITMAN, *ELECTRIC VEHICLES AS GRID RESOURCES IN ISO-NE AND VERMONT* (May 2014), <https://www.veic.org/documents/default-source/resources/reports/evt-rd-electric-vehicles-grid-resource-final-report.pdf>.

93. See Elsa Wenzel, *Vehicle-to-Grid Technology is Revving Up*, GREEN BIZ (Nov. 2019), <https://www.greenbiz.com/article/vehicle-grid-technology-revving>.

94. Mary H. Cooper, *Have U.S. Automakers Turned the Corner on Quality?*, CQ RESEARCHER (1992), <https://library.cqpress.com/cqresearcher/document.php?id=cqresrre1992101600>.

95. *Gas Prices Put Detroit Big Three in Crisis Mode*, NBC NEWS (June 1, 2008), <http://www.nbcnews.com/id/24896359/ns/business-autos/t/gas-prices-put-detroit-big-three-crisis-mode/>.

96. See *Gasoline Vehicle Phaseout Advances Around the World*, *supra* note 70.

## D. Vehicle Electrification in the United States

### 1. Federal Vehicle Electrification Policy

A unified federal standard for electrifying vehicles would maximize benefits for the environment, U.S. consumers, and automakers, because it would apply to all cars sold in the U.S. A federal standard would avoid the difficulties of passing vehicle electrification mandates in all fifty states.<sup>97</sup>

Such federal legislation has been proposed. The Federal “Zero Emission Vehicles Act of 2019,” introduced in May 2019 in both the House (H.R. 2764) and the Senate (S.1487), would require auto manufacturers to sell a minimum of 50% zero emission vehicles by 2030, and 100% zero emission vehicles by 2040.<sup>98</sup> Under this proposal, the majority of used cars would be zero emission vehicles by 2050. Senators and 2020 Democratic presidential candidates Harris, Gillibrand, Warren and Sanders have endorsed S. 1487.<sup>99</sup> Representative Gabbard sponsored H.R. 3671, which would phase out sales of gasoline-powered cars in 2035.<sup>100</sup>

As part of their presidential campaigns, Washington Governor Jay Inslee, Senators Sanders, Warren, and Booker, and Andrew Yang supported a federal gasoline vehicle phaseout by 2030; presidential candidates Pete Buttigieg and Michael Bloomberg supported a 2035 deadline.<sup>101</sup>

### 2. State Vehicle Electrification Legislation

Given the Trump Administration’s opposition to measures to improve the environment, state-level approaches are probably the most realistic pathway to near-term enactment of vehicle electrification legislation. This section describes recent state efforts to legislate vehicle electrification.

In 2018, California Assembly member Phil Ting introduced A.B. 1745, the first state-level gasoline phaseout bill in the U.S., aiming for a 2040 end date for

97. In fact, some states are passing measures designed to slow electric vehicle uptake. *See, e.g.,* Hiroko Tabuchi, *Behind the Quiet State-by-State Fight over Electric Vehicles*, N.Y. TIMES (Mar. 11, 2017), <https://www.nytimes.com/2017/03/11/business/energy-environment/electric-cars-hybrid-tax-credits.html>. Georgia, for instance, repealed its \$5,000 electric-vehicle tax credit in 2015 and replaced it with a \$200 registration fee for electric vehicles. *Id.*

98. Zero-Emission Vehicles Act of 2019, H.R. 2764, 116th Cong. (2019).

99. *See* Zero-Emission Vehicles Act of 2019, S. 1487, 116th Cong. (2019).

100. Off Fossil Fuels for a Better Future Act, H.R. 3671, 115th Cong. (2017).

101. *See* Bradley Berman, *2020 Democratic Candidates: Where Each Stands on Electric Cars*, ELECTREK (Dec. 21, 2019), <https://electrek.co/2019/12/21/2020-democratic-candidates-where-each-stands-on-electric-cars/>; *Michael Bloomberg Outlines Plans for Cleaner Buildings, Cars*, U.S. NEWS (Jan. 17, 2020), <https://www.usnews.com/news/politics/articles/2020-01-17/michael-bloomberg-outlines-plans-for-cleaner-buildings-cars>; Benjy Sarlin, *Green New Ride: 2020ers Race Toward an Electric Car Future, But Trump Has Other Ideas*, NBC NEWS (Sept. 19, 2019), <https://www.nbcnews.com/politics/2020-election/green-new-ride-2020ers-race-toward-electric-car-future-trump-n1055081>.

sales of new gasoline vehicles.<sup>102</sup> The oil industry lobbied strongly against A.B. 1745,<sup>103</sup> and the bill did not pass out of the Assembly Transportation Committee.<sup>104</sup> However, in 2019, California moved forward with a \$1.5 million study, which analyzes, among other things, pathways to a carbon-neutral vehicle fleet.<sup>105</sup>

California is in a unique position to influence emission standards through a special waiver provision in the Clean Air Act (CAA). The CAA authorizes California to apply for a waiver of the preemption provision of the CAA.<sup>106</sup> With an approved federal waiver, California could pass a gasoline vehicle phaseout.<sup>107</sup> If California required 100% of new vehicles to be zero emissions as part of its Zero Emissions Vehicle (ZEV) program, such regulations would apply to the ten other states that have adopted that program—about one-third of the U.S. vehicle market.<sup>108</sup>

California's authority under the CAA to set its own emissions standards (and the ability of other states to follow California's rules) is under attack by the Trump administration. The administration has issued an order revoking California's special status under the CAA and invalidating California's previously approved emissions regulations, despite the lack of precedent or legal basis for such an order. That order is now the subject of a court challenge joined by twenty-three states.<sup>109</sup>

102. A.B. 1745, State Assemb., 2017-2018 Reg. Session. (Cal. 2018), [https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill\\_id=201720180AB1745](https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AB1745).

103. E.g., Katie Fehrenbacher, *What's Behind the California Bill to Ban Internal Combustion Car Sales by 2040*, GREENBIZ (Mar. 29, 2018), <https://www.greenbiz.com/article/whats-behind-california-bill-ban-internal-combustion-car-sales-2040>.

104. Bill History, *AB-1745 Vehicles: Clean Cars 2040 Act*, Cal. Legis. Info., [https://leginfo.legislature.ca.gov/faces/billHistoryClient.xhtml?bill\\_id=201720180AB1745](https://leginfo.legislature.ca.gov/faces/billHistoryClient.xhtml?bill_id=201720180AB1745) (last visited Nov. 22, 2019).

105. See Dustin Gardiner, *California Idea to Study Phasing Out Gas-Powered Cars Wins New Life*, S.F. CHRON. (June 15, 2019), <https://www.sfchronicle.com/politics/article/California-idea-to-study-phasing-out-gas-powered-13999366.php>.

106. 42 U.S.C. § 7543(e)(2) (2018). The Federal Clean Air Act allows California to seek a waiver of the preemption provisions of the act that ordinarily forbid conflicting state legislation. See generally, *Vehicle Emissions California Waivers and Authorizations*, ENVTL. PROT. AGENCY, <https://www.epa.gov/state-and-local-transportation/vehicle-emissions-california-waivers-and-authorizations> (last updated June 23, 2017).

107. *Vehicle Emissions California Waivers and Authorizations*, ENVTL. PROT. AGENCY, <https://www.epa.gov/state-and-local-transportation/vehicle-emissions-california-waivers-and-authorizations> (last updated June 23, 2017).

108. See, e.g., Bengt Halvorson, *Colorado Adopts California Electric Vehicle Mandate*, GREEN CAR REPORTS (Aug. 16, 2019), [https://www.greencarreports.com/news/1124616\\_colorado-adopts-california-electric-vehicle-mandate](https://www.greencarreports.com/news/1124616_colorado-adopts-california-electric-vehicle-mandate).

109. E.g., Scott Neuman, *Trump Says California's Ability to Set Its Own Emissions Standards Will be Revoked*, NPR (Sept. 18, 2019) <https://www.npr.org/2019/09/18/761815991/white-house-to-revoke-waiver-allowing-california-to-set-its-own-emissions-standa>; Jonathan H. Adler, *Will EPA Trump California's Clean Air Act Waiver?*, REASON (Aug. 10, 2018), <https://reason.com/2018/08/10/will-epa-trump-californias-clean-air-act/>. It has long been assumed that California's Clean Air Act waiver included a de facto waiver of the preemption provisions of the Energy Policy and Conservation Act as well. See

Gasoline car phaseout legislation was also introduced in Hawaii in 2019.<sup>110</sup> The legislation would have prohibited the sale of any new car in 2030 or later that used an internal combustion engine.<sup>111</sup> Had the bill advanced, it may have run into preemption difficulties. The bill's legislative findings that the "internal combustion engine contributes to climate change [and] exacerbates air pollution" signal that the bill is designed to regulate greenhouse gases and air pollution, which are within the ambit of the Clean Air Act.<sup>112</sup> The bill also states that its purpose "is to eliminate Hawaii's dependence on fossil fuels," which could constitute a regulatory purpose within the scope of the EPCA.<sup>113</sup> Also in 2019, the Massachusetts legislature introduced a bill that would have required all new vehicles registered in the state be zero emissions vehicles starting in 2038.<sup>114</sup> The zero emissions requirement would likely have subjected this bill to preemption under the Clean Air Act.<sup>115</sup>

Related—albeit less expansive—legislation has been introduced or enacted in other states.<sup>116</sup> New Hampshire considered converting the state's government-owned vehicles to ZEVs, although the measure was vetoed by the governor.<sup>117</sup> New Jersey passed a bill setting a goal of 85% of new-vehicle sales being electric by 2040.<sup>118</sup> The District of Columbia passed an act requiring that public buses and

Green Mountain v. Crombie, 508 F. Supp. 2d 295, 354 (D. Vt. 2007); Central Valley Chrysler Jeep v. Goldstene, 529 F. Supp. 2d 1151, 1189 (E.D. Cal. 2007). The Trump Administration now asserts that California's CAA waiver does not grant a concurrent waiver under the EPCA. *See also* EPCA PREEMPTION FACT SHEET, U.S. DEP'T OF TRANSP. & U.S. ENVTL. PROT. AGENCY (Aug. 2018), [https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/fact\\_sheet\\_-\\_epca\\_preemption\\_final\\_clean\\_080218\\_v1-tag.pdf](https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/fact_sheet_-_epca_preemption_final_clean_080218_v1-tag.pdf).

110. S.B. 1338, 13th Leg., Reg. Session (Haw. 2019), [https://www.capitol.hawaii.gov/session2019/bills/SB1338\\_.htm](https://www.capitol.hawaii.gov/session2019/bills/SB1338_.htm).

111. *Id.* ("Beginning December 31, 2029, no person shall sell or offer for sale any motor vehicle that utilizes an internal combustion engine and has fewer than three hundred miles registered on the odometer.").

112. *Id.*; *see infra* Section II.B.1.

113. S.B. 1338, 13th Leg., Reg. Session (Haw. 2019), [https://www.capitol.hawaii.gov/session2019/bills/SB1338\\_.htm](https://www.capitol.hawaii.gov/session2019/bills/SB1338_.htm); *see infra* Section II.B.2.

114. An Act to a Clean Legislation Future, H. 2869, 191st Leg., Reg. Session (Mass. 2019), <https://malegislature.gov/Bills/191/H2869/BillHistory>.

115. *Id.* ("On and after January 1, 2038, the registrar shall not accept an application for original registration for any motor vehicle unless that vehicle is a zero emissions vehicle.").

116. *See Gasoline Vehicle Phaseout Advances Around the World*, COLTURA, <https://www.coltura.org/world-gasoline-phaseouts> (last visited Aug. 5, 2019).

117. *See* Press Release, Christopher T. Sununu, State of N.H. Office of the Governor, Governor's Veto Message Regarding Senate Bill 275 (June 25, 2019), <https://www.governor.nh.gov/news-media/press-2019/documents/sb275-veto-message.pdf>.

118. S. 2252, 218th Leg., Reg. Sess. (N.J. 2020).

privately owned fleet vehicles be ZEVs by 2045.<sup>119</sup> And a number of cities are considering restriction of gasoline-vehicle use within their boundaries.<sup>120</sup>

There are advantages to a state-based route. Individual states can experiment with approaches to curbing gasoline use, with successful approaches ultimately being adopted by other states. Under this strategy, states act as “laboratories of democracy,” under the traditional principles of federalism,<sup>121</sup> doing at the state level what might be difficult or impossible to do at once nation-wide.<sup>122</sup> Unlike countries, though, U.S. states must contend with and overcome the preemptive effects of federal law.

### 3. Washington’s Vehicle Electrification Legislation

This Article considers the preemption of state vehicle electrification mandate using the proposed Washington legislation as a model.<sup>123</sup>

The proposed legislation requires that all cars of model year 2030 or later sold or registered in Washington State be electric vehicles.<sup>124</sup> This requirement is referred to as the “2030 requirement.”<sup>125</sup> The bill defines “electric vehicles” to mean

119. See *Gasoline Vehicle Phaseout Advances Around the World*, *supra* note 68.

120. See THE MAYOR’S ELEC. VEHICLE WORKING GRP., PROPOSED ELECTRIC VEHICLE ROADMAP FOR SAN FRANCISCO (June 2019), [https://sfenvironment.org/sites/default/files/fliers/files/sfe\\_tr\\_ev-roadmap.pdf](https://sfenvironment.org/sites/default/files/fliers/files/sfe_tr_ev-roadmap.pdf) (setting goals and planning towards restricting gasoline-vehicle use within their boundaries); see also MAYOR ERIC GARCETTI, L.A.’S GREEN NEW DEAL: SUSTAINABLE CITY PLAN 82 (2019), [https://plan.lamayor.org/sites/default/files/pLAn\\_2019\\_final.pdf](https://plan.lamayor.org/sites/default/files/pLAn_2019_final.pdf) (planning for 80% of the vehicles driven within the city to be zero emissions by 2035, rising to 100% by 2050, and planning to roll out fossil fuel free zones in the city beginning in 2030); *Seattle, Other Major World Cities Pledge to Ban Gas, Diesel Vehicles*, KOMO (Oct. 23, 2017), <https://komonews.com/news/local/seattle-other-major-world-cities-pledge-to-ban-gas-diesel-vehicles>; CITY OF BERKELEY, COMMUNITY ENVTL. ADVISORY COMM., PROHIBITION ON THE USE OF CITY STREETS FOR OPERATING, PARKING, OR IDLING COMBUSTION VEHICLES BY 2045, [https://www.cityofberkeley.info/uploadedFiles/Planning\\_and\\_Development/Level\\_3\\_-\\_Commissions/Commission\\_for\\_Community\\_Environmental\\_Advisory/CEAC%20DRAFT%20Combustion%20Vehicle%20Operation%20Ban%20082619.pdf](https://www.cityofberkeley.info/uploadedFiles/Planning_and_Development/Level_3_-_Commissions/Commission_for_Community_Environmental_Advisory/CEAC%20DRAFT%20Combustion%20Vehicle%20Operation%20Ban%20082619.pdf).

121. See, e.g., *New State Ice Co. v. Liebmann*, 285 U.S. 262, 311 (1932) (Brandeis, J., dissenting); see also Jessica Bulman-Pozen & Heather K. Gerken, Essay, *Uncooperative Federalism*, 118 YALE L.J. 1256, 1261 n.6 (2009) (collecting sources); Adam Babich, *The Supremacy Clause, Cooperative Federalism, and the Full Federal Regulatory Purpose*, 64 ADMIN. L. REV. 1, 26-29 (2012) (describing environmental cooperative federalism in the United States).

122. See Abbe R. Gluck, *Our [National] Federalism*, 123 YALE L.J. 1996, 2022 (2014) (“States also do sometimes still act as first-movers, performing their traditional ‘states as laboratories’ role, in trying out controversial policies. Sometimes, such state innovation even creates what might be understood as a different kind of ‘national law’ . . . an informal fifty-state convergence that makes federal legislation unnecessary.”). Every state had taken some measure to combat climate change by 2006. Daniel A. Farber, *Climate Change, Federalism, and the Constitution*, 50 ARIZ. L. REV. 879, 880-81 (2008).

123. *Draft bill concerning the electrification of transportation*, *supra* note 18.

124. *Id.*

125. *Id.*

vehicles using an electric motor rather than an internal combustion engine for propulsion.

The Washington vehicle electrification bill begins with legislative findings related to the sufficiency of existing electric vehicle technology and the state's own electrical-grid resources.<sup>126</sup> It articulates an economic-development and job-creation rationale based on technological development.<sup>127</sup> It finds that electric vehicles can serve as a power load balancing and energy storage and resilience resource for the electric grid.<sup>128</sup> It finds that widespread vehicle electrification will save consumers money on vehicle maintenance, and will drive down electric rates for all utility consumers.<sup>129</sup> It also addresses environmental concerns not regulated by the CAA or EPCA, such as the the dripping of toxic liquids and stormwater pollution.<sup>130</sup> The bill finds that encouraging adoption of electric vehicles will increase the utility of all electric vehicles through an economic network effect.<sup>131</sup> All these rationales are outside the scope of federal preemption.

Operationally, the bill directs the state's transportation commission<sup>132</sup> to implement a "scoping plan" for implementing the 2030 requirement. Criteria for developing and analyzing the plan are prescribed.<sup>133</sup> The commission is directed to promulgate regulations by 2025 for implementing the 2030 requirement.<sup>134</sup>

The bill follows in the wake of "100% Clean" legislation enacted in the spring of 2019, which requires Washington utilities to transition to a carbon-neutral electricity supply by 2030 and puts the state on a path to entirely eliminate fossil fuels from electricity generation by 2045,<sup>135</sup> and a similar vehicle electrification mandate bill introduced in 2020.<sup>136</sup>

126. *Id.*

127. *Id.*

128. *Id.*

129. *Id.*

130. *Id.*

131. *Id.*

132. See generally WASH. STATE TRANSP. COMM'N, <https://wstc.wa.gov/> (last visited Dec. 1, 2019).

133. *Draft bill concerning the electrification of transportation, supra* note 18.

134. *Id.*

135. S.B. 5116, 66th Leg., Reg. Sess., 2019 Wash. Sess. Laws 1608, 1, [lawfilesexternal.wa.gov/biennium/2019-20/Pdf/Bills/Senate%20Bills/5116.pdf](http://lawfilesexternal.wa.gov/biennium/2019-20/Pdf/Bills/Senate%20Bills/5116.pdf); JAY INSLEE, POLICY BRIEF: WASHINGTON ENACTS STRONGEST CLEAN ELECTRICITY STANDARD IN THE NATION 1 (May 2019), <https://www.governor.wa.gov/sites/default/files/documents/clean-electricity-policy-brief-bill-signing.pdf>; see also David Roberts, *A Closer Look at Washington's Superb New 100% Clean Electricity Bill*, VOX (Apr. 18, 2019), <https://www.vox.com/energy-and-environment/2019/4/18/18363292/washington-clean-energy-bill>.

136. H.B. 2515, 66th Leg., Reg. Sess. (Wash. 2020).

## II. PREEMPTION PRECEDENTS FOR STATE REGULATION OF VEHICLES

Circuit court and Supreme Court precedent does not require preemption of vehicle electrification mandates. Section II.A of this Part establishes the constitutional basis for preemption. Then, Section II.B reviews the federal statutes that would ground preemption challenges to state vehicle electrification—namely, the Clean Air Act and the Environmental Policy & Conservation Act. Finally, Section II.C discusses the major circuit court case law on the preemption provisions relevant to the proposed Washington vehicle electrification legislation.

### A. Constitutional Basis of Preemption

Federal preemption is based on the Supremacy Clause.<sup>137</sup> A law otherwise within a state's power to enact is invalid if federal law provides otherwise. Federal law may preempt state and local law either by express terms in statutory language (i.e., express preemption) or by implication based on a statute's purpose and structure (i.e., implied preemption).<sup>138</sup> Implied preemption appears in two broad varieties.<sup>139</sup> First is field preemption, in which a federal regulatory scheme is "so pervasive as to make reasonable the inference that Congress left no room" for state law.<sup>140</sup> Second is conflict preemption, in which "compliance with both federal and state regulations is a physical impossibility" or in which a state law "stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress."<sup>141</sup>

The basic principle of preemption—in the event of a conflict, federal law prevails—is straightforward. But the underlying analysis can be trickier, especially when state laws seek to regulate matters not contemplated by the drafters of prior federal legislation. Because preemption involves analysis of the overlap of unique state laws with diverse federal laws, the application of preemption doctrine is context dependent and difficult to predict.

Deciding when a law is preempted is context-driven, and there is no one clear rule.<sup>142</sup> Justice Frankfurter noted that "the generalities" regarding preemption that may be drawn from the cases do not decide them. Rather, he wrote, "the fate of state legislation in these cases has not been determined by these generalities but by

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137. U.S. CONST. art. VI, cl. 2; *Gade v. Nat'l Solid Wastes Mgmt. Ass'n*, 505 U.S. 88, 108 (1992) (articulating that preemption derives from the Supremacy Clause); *Virginia Uranium v. Warren*, 139 S. Ct. 1894, 1901 (June 17, 2019) (echoing same); *see also* *Tufariello v. Long Island R. Co.*, 458 F.3d 80, 86 (2d Cir. 2006).

138. *See* *Cipollone v. Liggett Grp.*, 505 U.S. 504, 545 (1992).

139. *Virginia Uranium*, 139 S. Ct. at 1901.

140. *Gade*, 505 U.S. at 98.

141. *Id.*

142. *See* *Hines v. Davidowitz*, 312 U.S. 52, 67 (1941) ("In the final analysis, there can be no one crystal clear distinctly marked formula.").

the weight of the circumstances and the practical and experienced judgment in applying these generalities to the particular instances.”<sup>143</sup>

Ultimately, the intent of Congress is the touchstone of preemption analysis.<sup>144</sup> This is true whether the preemption in question is implied or express.<sup>145</sup> In the area of preemption analysis, textualism<sup>146</sup> has had less sway.<sup>147</sup> However, as discussed below, recent decisions such as *Virginia Uranium* point to an increasing role for textualism in preemption analysis.<sup>148</sup>

Moreover, there remains a presumption against preemption, a position advanced by the Court’s increasingly influential conservatives.<sup>149</sup> Congress must be “clear” or supply a “plain statement” to preempt,<sup>150</sup> and courts must assume “that the historic police powers of the States [a]re not to be superseded by the Federal Act unless that was the clear and manifest purpose of Congress.”<sup>151</sup> But Congress is often silent about its intent, at least as far as preemption is concerned.<sup>152</sup>

Preemption has significant policy ramifications. Judicial determinations of the validity of state and local law tip the balance of power between state and federal governments and can limit the ability of state legislatures and state courts to com-

143. *Union Brokerage Co. v. Jensen*, 322 U.S. 202, 211 (1944).

144. *Lorillard Tobacco Co. v. Reilly*, 533 U.S. 525, 540-41 (2001).

145. *See Gade*, 505 U.S. at 96; *see also Virginia Uranium, Inc. v. Warren*, 139 S. Ct. 1894, 1901 (2019) (“We examine . . . preemptive effect much as we would any other about statutory meaning, looking to the text and context of the law in question and guided by the traditional tools of statutory interpretation.”) (plurality opinion); *id.* (noting that the categories of “express, field, and conflict preemption . . . are not rigidly distinct”) (quoting *Crosby v. Nat’l Foreign Trade Council*, 530 U.S. 363, 372 n.6 (2000)); Catherine L. Fisk, 33 HARV. J. LEGIS. 35, 43-46 (1996) (characterizing the difference between the express and implied preemption analyses as a “distinction without a difference”).

146. Textualism is a focus on the text of a statute and a sharp deemphasis—or even delegitimiza- tion—of other traditional statutory interpretation approaches such as purposivism or intentionalism. *See generally* ANTONIN SCALIA, *Common-Law Courts in a Civil-Law System: The Role of United States Federal Courts in Interpreting the Constitution and Laws*, in A MATTER OF INTERPRETATION 3 (Amy Gutmann, ed., 1997); ANTONIN SCALIA & BRYAN A. GARNER, *READING LAW* (2012).

147. *See generally* Daniel J. Meltzer, *Preemption and Textualism*, 112 MICH. L. REV. 1 (2013).

148. *See Virginia Uranium*, 139 S. Ct. at 1907-08 (plurality opinion) (“Efforts to ascribe unenacted purposes and objectives to a federal statute face many of the same challenges as inquiries into state legislative intent . . . . The only thing a court can be sure of is what can be found in the law itself.”).

149. *See Meltzer, supra* note 147, at 35-43, 52-55. *See also Kansas v. Garcia*, 140 S. Ct. 791, 808 (2020) (Thomas, J., concurring) (“[F]ederal law pre-empts state law only if the two are in logical contradiction.”) (internal citations omitted). “The doctrine of ‘purposes and objectives’ pre-emption impermissibly rests on judicial guesswork about broad federal policy objectives, legislative history, or generalized notions of congressional purposes that are not contained within the text of federal law.” *Id.* (internal citations omitted).

150. *Rice v. Santa Fe Elevator Corp.*, 331 U.S. 218, 230 (1947); *Gregory v. Ashcroft*, 501 U.S. 452, 457-61 (1991).

151. *Ass’n of Taxicab Operators USA v. City of Dallas*, 720 F.3d 534, 538 (5th Cir. 2013) (quoting *Altria Grp. v. Good*, 555 U.S. 70, 77 (2008)) (alteration in original).

152. Fisk, *supra* note 145, at 43-44.

bat problems facing their citizens.<sup>153</sup> As independent sovereigns, states can blaze trails and pass innovative or nationally controversial legislation. Eventually, as more states adopt the legislation, they can converge around an optimal solution that bypasses the need for federal legislation.<sup>154</sup> Thus, although an overly narrow approach to preemption would shorten the reach of federal law and its uniform application across the fifty states, an overly expansive approach to preemption would limit this ability of states to serve as “laboratories of democracy,” and to enact innovative local policies under the traditional principles of federalism.<sup>155</sup>

## B. Federal Statutory Authority Relevant to Vehicle Electrification Mandates

Two statutes are relevant to preemption of state vehicle electrification mandates: the Clean Air Act (CAA) and the Environmental Policy & Conservation Act (EPCA).

### 1. The Clean Air Act

The CAA is one of the most significant modern environmental laws. First passed in 1963, the Act regulates emissions from various sources with the goal of protecting public health.<sup>156</sup> It has been subsequently updated by various amend-

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153. See, e.g., Michael R. Abrams, Note, *Renovations Needed: The FDA's Floor/Ceiling Framework, Preemption, and the Opioid Epidemic*, 117 MICH. L. REV. 143, 153-60 (2018) (discussing how preemption affects tort law in the context of the opioid epidemic and federal prescription drug regulation).

154. See Abbe R. Gluck, *Our [National] Federalism*, 123 YALE L.J. 1996, 2021 (2014) (“States also do sometimes still act as first-movers, performing their traditional ‘states as laboratories’ role, in trying out controversial policies. Sometimes, such state innovation even creates what might be understood as a different kind of ‘national law’ . . . an informal fifty-state convergence that makes federal legislation unnecessary.”).

155. See, e.g., *New State Ice Co. v. Liebmann*, 285 U.S. 262, 311 (1932) (Brandeis, J., dissenting); see also Jessica Bulman-Pozen & Heather K. Gerken, Essay, *Uncooperative Federalism*, 118 YALE L.J. 1256, 1261 n.6 (2009) (collecting sources); cf. *Virginia Uranium, Inc. v. Warren*, 139 S. Ct. 1894, 1906 (2019) (plurality opinion) (“Consider just some of the costs to cooperative federalism and individual liberty we would invite by inquiring into state legislative purpose too precipitately. The natural tendency of regular federal judicial inquiries into state legislative intentions would be to stifle deliberation in state legislatures and encourage resort to secrecy and subterfuge. That would inhibit the sort of open and vigorous legislative debate that our Constitution recognizes as vital to testing ideas and improving laws.”).

156. Christopher D. Ahlers, *Origins of the Clean Air Act: A New Interpretation*, 45 LEWIS & CLARK L. REV. 75, 84-94 (2015).

ments.<sup>157</sup> Notably, Part A of Title II of the CAA covers regulation of motor vehicle emissions and fuel standards.<sup>158</sup>

Although the CAA is an expansive federal regulatory regime, the congressional findings and declaration of purpose set forth in the CAA suggest that Congress contemplated a far-reaching role for states in protecting air quality.<sup>159</sup> Section 101(a)(3) finds “that air pollution prevention . . . and air pollution control at its source is the primary responsibility of states and local governments.”<sup>160</sup> Section 101(b) declares the CAA’s purpose is “to protect and enhance the quality of the Nation’s air resources so as to promote the public health and welfare and the productive capacity of its population.”<sup>161</sup> Section 101(c) declares that “[a] primary goal of this chapter [of the CAA] is to encourage or otherwise promote reasonable Federal, State, and local governmental actions, consistent with the provisions of this chapter, for pollution prevention.”<sup>162</sup>

The above-mentioned provisions of the CAA clearly contemplate state involvement in air pollution regulation, and the law was originally passed without any express preemption provision.<sup>163</sup>

Nonetheless, the Air Quality Act of 1967 amended the CAA to include such a provision as a compromise between states (who favored autonomy) and manufacturers (who favored preemption).<sup>164</sup> The result, Section 209(a) of the CAA, provides that “[n]o State or any political subdivision thereof shall adopt or attempt to enforce any standard relating to the control of emissions from new motor vehicles or new motor vehicle engines subject to this part.”<sup>165</sup> It is this “relating to” provi-

157. See Motor Vehicle Air Pollution Control Act of 1965, Pub. L. No. 87-272, 79 Stat. 992; Air Quality Act of 1967, Pub. L. No. 90-148, 81 Stat. 485; Clean Air Act Extension of 1970, Pub. L. No. 91-604; Clean Air Act Amendments of 1977, Pub. L. No. 95-95, 91 Stat. 685; Clean Air Act Amendments of 1990, Pub. L. No. 101-549, 104 Stat. 2468.

158. 42 U.S.C. § 7521 (2010) (Part A of Title II deals with Motor Vehicle Emission and Fuel Standards).

159. See 42 U.S.C. § 7401 (2010) (finding “that air pollution prevention . . . and air pollution control at its source is the primary responsibility of States and local governments;” finding “that Federal financial assistance and leadership is essential for development of cooperative Federal, State, regional, and local programs to prevent and control air pollution;” declaring a primary goal to “encourage or otherwise promote reasonable Federal, State, and local governmental actions . . .”).

160. *Id.*

161. *Id.* § 7401(b)(1).

162. *Id.* § 7401(c).

163. Raymond B. Ludwizewski & Charles H. Haake, *Cars, Carbon, and Climate Change*, 102 NW. U. L. REV. 665, 676 (2008).

164. *Id.*

165. 42 U.S.C. § 7543(a) (2018).

sion that establishes the express preemptive effect of the CAA as far as vehicle emissions are concerned.<sup>166</sup>

This preemption is limited. The CAA's express preemption provision is followed by a savings clause: "Nothing in this part shall preclude or deny to any State or political subdivision thereof the right otherwise to control, regulate, or restrict the use, operation, or movement of registered or licensed motor vehicles."<sup>167</sup>

A New Jersey District Court found that

[w]hile the Court recognizes the breadth of federal regulation in the [emissions] area, the savings clause [in CAA § 209(d)] suggests that Congress did not intend to occupy the entire field of motor vehicle regulation. Instead, the text of the Act explicitly contemplates continued state involvement in the regulation of motor vehicles.<sup>168</sup>

The court emphasized that "federal regulation of motor vehicle emissions does not extend so far as to preclude claims that do not relate to adoption or enforcement of emissions standards."<sup>169</sup>

## 2. The Energy Policy and Conservation Act

The EPCA<sup>170</sup> was passed in the midst of the 1970s oil crisis to secure U.S. energy independence.<sup>171</sup> That statute authorized the National Highway Traffic Safety Administration to create fuel-efficiency standards, and preempted states from doing the same.<sup>172</sup>

A purpose of EPCA, set forth in Section 2(4) of the Act, is "to conserve energy supplies through energy conservation programs, and, where necessary, the regulation of certain energy uses."<sup>173</sup> Another purpose, set forth in Section 2(5) of the Act, is "to provide for improved energy efficiency of motor vehicles."<sup>174</sup>

EPCA's preemption provision provides, in pertinent part, that

166. See Ludwiszewski & Haake, *supra* note 163, at 676; see also Engine Mfrs. Ass'n v. South Coast Air Quality Mgmt. Dist., 541 U.S. 246, 258 (2004) (stating that "it appears likely that certain aspects of the [respondent government rules] are pre-empted" by Section 209(a)).

167. Clean Air Act of 1963 § 209(d), 42 U.S.C. § 7543(d).

168. *In re Caterpillar, Inc.*, No. 1:14-cv-3722 (JBS-JS), slip op. at 41-42 (D.N.J. July 29, 2015) (footnotes omitted).

169. *Id.* at 42.

170. Energy Policy and Conservation Act of 1976, Pub. L. No. 94-163, 89 Stat. 871 (1975).

171. See *id.* § 2, 89 Stat. 874.

172. See EELPS Staff, *California, CAFE Standards, and the Energy Policy and Conservation Act*, HLS ENVTL. & ENERGY L. PROGRAM (June 19, 2018), <https://eelplaw.harvard.edu/2018/06/california-cafe-standards-and-the-energy-policy-and-conservation-act/>.

173. 42 U.S.C. § 6201(a)(4) (2018).

174. *Id.* § 6201(a)(5).

[w]hen 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.<sup>175</sup>

Parallel to the CAA, it is this provision of EPCA that grounds its preemptive effect with respect to vehicle fuel economy standards.

“Fuel” is defined by EPCA as “gasoline . . . diesel oil . . . or other liquid or gaseous fuel.”<sup>176</sup> “Fuel economy” is defined as “the average number of miles traveled by an automobile for each gallon of gasoline (or equivalent amount of other fuel) used.”<sup>177</sup> EPCA defines “alternative fuels” to include electricity<sup>178</sup> and directs the EPA administrator to “include in the calculation of average fuel economy . . . equivalent petroleum-based fuel economy values determined by the Secretary of Energy for various classes of electric vehicles.”<sup>179</sup> The EPA calculates fuel economy for electric vehicles in terms of miles per gallon equivalent, or MPGe.<sup>180</sup>

### C. Leading Vehicle Emissions and Fuel Economy Standards Preemption Precedents

A limited number of decisions bear directly on the preemptive effect of the CAA and EPCA with respect to emissions-related laws. Of these, three are particularly pertinent: the Supreme Court’s decision in *EMA v. South Coast Air Quality Management District*,<sup>181</sup> the Second Circuit decision in *Metropolitan Taxicab v. City of New York*,<sup>182</sup> and the Fifth Circuit decision in *Association of Taxicab Operators USA v. City of Dallas*.<sup>183</sup>

#### 1. EMA v. South Coast Air Quality Management District

In *EMA*, the Supreme Court struck down California South Coast Air Quality Management District rules (“fleet rules”) prohibiting fleet operators from purchasing new diesel vehicles based on section 209(a) of the CAA.<sup>184</sup> The stated purpose

175. 49 U.S.C. § 32919(a) (2018).

176. *Id.* § 32901(a)(10).

177. *Id.* § 32901(a)(11).

178. *Id.* § 32901(a)(1)(J).

179. *Id.* § 32904(a)(2)(B).

180. See *Text Version of the Electric Vehicle Label*, U.S. ENVTL. PROT. AGENCY, <https://www.epa.gov/fueleconomy/text-version-electric-vehicle-label> (last visited Feb. 20, 2020).

181. 541 U.S. 246 (2004).

182. 615 F.3d 152 (2d Cir. 2010).

183. 720 F.3d 534 (5th Cir. 2013).

184. *Engine Mfrs. Ass’n v. South Coast Air Quality Mgmt. Dist. (“EMA”)*, 541 U.S. 246 (2004).

of the fleet rules in question was to reduce pollutant emissions from fleet vehicles.<sup>185</sup> The defendant air district had argued, and the Ninth Circuit had agreed, that the fleet rules escaped preemption because they were indirect “purchase restrictions” rather than direct vehicle emissions “standards.”<sup>186</sup> The Supreme Court reversed on an 8-1 vote, ruling that the fleet rules’ commands to fleet operators to not purchase diesel vehicles functioned as emission controls on the manufacture and sale of new motor vehicles and engines, and were therefore a prohibited “standard relating to the control of emissions” in conflict with the CAA.<sup>187</sup> The Court’s holding focused on whether purchase restrictions constituted a prohibited standard.<sup>188</sup>

The *EMA* Court stated that

[t]he criteria referred to in [CAA] § 209(a) relate to the emission characteristics of a vehicle or engine. To meet them the vehicle or engine must not emit more than a certain amount of a given pollutant, must be equipped with a certain type of pollution-control device, or must have some other design feature related to the control of emissions.<sup>189</sup>

Unlike the fleet rules in *EMA*, the proposed Washington legislation does not have a stated purpose of regulating emissions; it does not set emissions limits, mandate the use of a pollution-control device, nor require the use of a design feature related to the control of emissions.<sup>190</sup> It does not reference nor directly regulate emissions, gasoline, or diesel.<sup>191</sup> Rather, the Washington bill is grounded in the economic and other non-emissions benefits of an all-electric vehicle fleet—rationales not covered by the CAA.<sup>192</sup> The stated non-emissions benefits to Washington include job creation, economic development, consumer benefit, water quality and salmon protection—all domains squarely within traditional conceptions of state police power.<sup>193</sup>

185. See, e.g., Cal. S. Coast Air Quality Mgmt. Dist., Commercial Airport Ground Access (Fleet Rules), Rule 1194(a) (2000), <https://ww3.arb.ca.gov/drdb/sc/curhtml/r1194.pdf> (“For all public and private fleets that provide passenger transportation services out of commercial airports operating in the South Coast Air Quality Management (District), this rule requires . . . vehicle fleet operators to acquire cleaner burning or alternative-fueled vehicles to reduce air toxic and criteria pollutant emissions when procuring or leasing these vehicles in the District unless otherwise exempt.”).

186. *EMA*, 541 U.S. at 251-52.

187. *Id.* at 252-55.

188. See *id.*

189. *EMA*, 541 U.S. at 253. Compliance with California’s then-extant ZEV regulation was one of several pathways by which a fleet operator under the fleet rules could meet the emission-control requirements. The ZEV regulation in question (CCR 1960.1) did mention electricity but defined a ZEV as a vehicle that does not “produce emissions of any criteria pollutants.”

190. See *supra* Section I.D.3.

191. *Id.*

192. *Id.*

193. *Id.*

Challengers of the Washington legislation would likely argue that an electric motor mandate is a “design feature related to the control of emissions,”<sup>194</sup> as prohibited by the CAA. But that argument is overly simplistic. An electric motor is not simply a lower-emission or more efficient internal combustion engine: it is an entirely different propulsion mechanism. And the primary purpose of an electric motor is propelling the vehicle forward, not controlling emissions. It is unlike a diesel engine (which still generates emissions, but a different amount) or a catalytic converter (a design feature whose sole purpose is emissions reduction).

The reach of *EMA* is also in doubt fifteen years later. Because the Washington legislation does not explicitly state an emissions-related purpose, the Court would have to conjure such a purpose out of context and legislative history and find that inferred purpose to be sufficient to ground preemption. But, as discussed later, the increasingly textualist and conservative court is likely to be reluctant to do so, especially after *Virginia Uranium v. Warren*.<sup>195</sup>

## 2. *Metropolitan Taxicab v. City of New York*

In *Metropolitan Taxicab Board of Trade v. City of New York*,<sup>196</sup> the Second Circuit held that New York City rules requiring taxicab owners to charge lower lease rates for conventionally powered taxis relative to hybrid taxis were preempted by the federal Energy Policy and Conservation Act (EPCA), which governs fuel economy standards.<sup>197</sup> It based its decision on a finding that the purpose of the rules requiring hybrids was to regulate fuel economy.<sup>198</sup> In light of the purpose to regulate fuel economy, the court held the rules were in direct conflict with EPCA.<sup>199</sup> The court ruled that the city’s stated justification that the measure targeted fuel cost risk to taxi drivers was inadequate, because the rules directly related to the fuel economy of the vehicles affected, and the cost savings to drivers were derivative of the fuel economy benefits.<sup>200</sup>

The proposed Washington bill can be distinguished from the ordinance the Second Circuit held preempted in *Metropolitan Taxicab*. First, the Washington bill does not contain a reference to fuel economy standards or make fuel economy

194. *EMA*, 541 U.S. at 253.

195. *Virginia Uranium, Inc. v. Warren*, 139 S. Ct. 1894 (2019). See *infra* Section III.A for a fuller discussion of the impacts of *Virginia Uranium*.

196. *Metropolitan Taxicab Board of Trade v. City of New York*, 615 F.3d 152, 157 (2d Cir. 2010).

197. See *supra* Section II.B.2.

198. *Metropolitan Taxicab*, 615 F.3d at 157 (“[T]he City is unable to identify any plausible alternative reason [other than fuel economy] for the imposition of such an engine-based rule.”).

199. Section 509(a) of the EPCA provides “[w]hen an average fuel economy standard prescribed by 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.” 49 U.S.C. § 32919(a) (2018).

200. *Metropolitan Taxicab*, 615 F.3d at 157.

standards essential to its operation, which was the basis for the ruling in *Metropolitan Taxicab*. Second, the Washington bill has powerful non-emissions, non-fuel economy justifications, unlike *Metropolitan Taxicab*, where the court based its holding on the premise that there are no advantages to hybrids other than their better fuel economy.<sup>201</sup> Finally, the stated benefits of the Washington legislation, such as improved reliability of the electric grid, less contaminated water runoff and the like,<sup>202</sup> are not derivative of fuel economy benefits, as mandated reduction of fuel cost risk was found to be in *Metropolitan Taxicab*<sup>203</sup>—they are independently valuable.<sup>204</sup>

### 3. *Association of Taxicab Operators USA v. City of Dallas*

In *Association of Taxicab Operators USA v. City of Dallas (ATO)*,<sup>205</sup> a decision at odds with *Metropolitan Taxicab*, the Fifth Circuit upheld an ordinance incentivizing compressed natural gas (CNG) taxicabs by giving them the right to go to the head of the taxicab line at the airport.

The court found that such modest incentive programs do not constitute prohibited “standards” under the CAA.<sup>206</sup> The taxicab privileges were neither “standards” on their face nor because of their indirect effects. The court concluded that the program, “enacted using traditional police powers, [was] not superseded by any clear and manifest purpose of Congress, above all where Congress’s term ‘standard’ has been identified as one ‘susceptible’ to a mandate/incentive distinction.”<sup>207</sup>

Although the Fifth Circuit upheld the ordinance in *ATO*, the Washington bill can be distinguished from the *ATO* ordinance on the basis that the Dallas ordinance specifically referenced the surrounding region’s nonattainment of ozone standards and the fewer air pollutants emitted by CNG vehicles. The references to air quality put the Dallas ordinance squarely within the ambit of the CAA, and therefore required a closer analysis of allowable local regulation under the CAA than does the Washington bill, which does not have a stated purpose of reducing emissions.

The conflicting rationales leading to opposing results in *Metropolitan Taxicab* and *ATO* (decided three years later) illustrate the often-contradictory nature of

201. *Id.* at 157-58.

202. *See supra* Section I.D.3.

203. *Metropolitan Taxicab*, 615 F.3d at 158.

204. A federal district court in Massachusetts found EPCA preemption on nearly identical facts to those in *Metropolitan Taxicab*, and that case can be distinguished from the Washington legislation on the same grounds. *See Ophir v. City of Boston*, 647 F. Supp. 2d 86, 88, 92 (D. Mass. 2009) (finding a requirement for new taxicabs to meet “efficiency” standards, with those standards defined to include only hybrid taxis, to be related to fuel economy standards).

205. *Association of Taxicab Operators USA v. City of Dallas (ATO)*, 720 F.3d 534 (5th Cir. 2013).

206. *ATO*, 720 F.3d at 539-42.

207. *Id.* at 540 (internal citation omitted).

preemption analysis and show that *EMA*, by itself, does not signal an end to state efforts to control vehicle emissions.

### III. VEHICLE ELECTRIFICATION MANDATE PREEMPTION THROUGH THE LENS OF *VIRGINIA URANIUM*

How would today's Court approach a state-based vehicle electrification mandate? Part III.A demonstrates that in *Virginia Uranium v. Warren*, the Supreme Court indicated an increasing unwillingness to inquire into state motives if the clear text of a federal statute does not support preemption. Part III.B contends that the proposed Washington vehicle electrification bill is not expressly preempted under the "relating to" clauses of the CAA or EPCA. Part III.C concludes that the vehicle electrification mandate would not be impliedly preempted.

#### A. *The Court and Preemption Under Virginia Uranium*

The Supreme Court's most recent examination of its preemption jurisprudence came in June of 2019 with *Virginia Uranium, Inc. v. Warren*.<sup>208</sup> The decision, which featured a 3-3-3 split of opinions, signaled growing skepticism of the Court's preemption jurisprudence. In particular, the case called into question the practice of federal judges peering into state motives for passing challenged legislation.

In *Virginia Uranium*, the Court considered whether a Virginia law banning uranium mining was preempted by the Federal Atomic Energy Act (AEA).<sup>209</sup> The Commonwealth of Virginia had banned uranium mining in the 1970s following the discovery of a large deposit of uranium ore.<sup>210</sup> The ban was ostensibly motivated, at least in part, by concerns about the environment and public health.<sup>211</sup> The law banned uranium mining until a state-established permitting process could be developed.<sup>212</sup> But interest in uranium mining waned in the 1970s and 1980s, a permitting process was never established, and the ban was never lifted.<sup>213</sup> This century saw rising uranium prices, prompting new interest in mining.<sup>214</sup> *Virginia Uranium*, after unsuccessfully lobbying to lift the ban, sought a declaratory judgment that the ban was preempted by the AEA.<sup>215</sup>

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208. *Virginia Uranium, Inc. v. Warren*, 139 S. Ct. 1894 (2019).

209. *Id.* at 1900.

210. *Id.* at 1910-11 (Ginsburg, J., concurring).

211. *Id.* at 1910.

212. *Id.*

213. *Id.*

214. *See id.*

215. *Id.*

Understanding the preemption argument in *Virginia Uranium* requires basic understanding of the production of nuclear fuel.<sup>216</sup> First, uranium ore—that is, underground rocks embedded with impure but extractable uranium—is mined from the earth.<sup>217</sup> To separate the valuable uranium from the rest of the mined material, a process called “milling” is used, in which the ore is crushed and chemically treated.<sup>218</sup> The resulting extracted uranium is then processed elsewhere, while sandy, radioactive waste called “tailings” remains at the mining site.<sup>219</sup> Milling and tailing substances must be carefully stored—usually close to the mining site, as Virginia Uranium planned to do.<sup>220</sup>

The AEA regulates milling and tailing, but not mining; that is, the AEA on its face only applies once uranium is removed from the earth.<sup>221</sup> Virginia Uranium, though, contended that the expansive nature of the AEA preempted state uranium mining laws by establishing the Nuclear Regulatory Commission as the lone regulator of anything having to do with uranium, including mining.<sup>222</sup> The NRC had not banned uranium mining, the company argued, so no one else could either.<sup>223</sup> Further, the NRC had been empowered by the AEA to govern public health and safety aspects of the uranium fuel production process.<sup>224</sup> Virginia Uranium contended that the Commonwealth had been motivated not by resource-conservation concerns but by health and safety concerns, thus seeking to improperly, if indirectly, impinge on the NRC’s regulatory authority.<sup>225</sup>

Justice Gorsuch, in a lead opinion joined by Justices Thomas and Kavanaugh, held that Virginia’s uranium-mining ban was not preempted.<sup>226</sup> The justice first discarded an express-preemption argument, noting that the text of the statute only imbued the NRC with regulatory authority after uranium’s removal from the ground. Virginia Uranium had contended that language in the AEA prevented states from regulating on the basis of nuclear safety, given that the language only covered purposes *other than* safety:

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216. See *id.* at 1900 (plurality opinion).

217. See *id.*; *Radioactive Waste From Uranium Mining and Milling*, U.S. ENVTL. PROT. AGENCY, <https://www.epa.gov/radtown/radioactive-waste-uranium-mining-and-milling> (last updated Mar. 29, 2019).

218. See *Virginia Uranium*, 139 S. Ct. at 1900.

219. See *id.* at 1900.

220. *Id.*

221. *Id.* at 1900-02 (plurality opinion).

222. *Id.* at 1901 (plurality opinion).

223. See *id.* at 1901 (“And because the NRC’s regulations say nothing about uranium mining . . . [the company] remains free to mine as it will in Virginia or elsewhere.”).

224. See *id.* at 1909-10 (Ginsburg, J., concurring).

225. See *id.* at 1912 (Ginsburg, J., concurring).

226. See *id.* at 1900 (Gorsuch, J.) (plurality opinion) (“Virginia Uranium insists that the [AEA] preempts a state law banning uranium mining, but we do not see it.”).

Nothing in this section shall be construed to affect the authority of any State or local agency to regulate activities for purposes other than protection against radiation hazards.<sup>227</sup>

The Court, though, rejected such an expansive reading. Instead, it held that the provision constituted a “non-preemption clause” limiting which state regulatory activities may be scrutinized.<sup>228</sup>

Justice Gorsuch also expressed strong skepticism regarding inquiry into state legislative purpose when conducting an implied preemption analysis:

It is one thing to . . . inquire exactly into state legislative purposes when state law prohibits a regulated activity like the construction of a nuclear plant, and thus comes close to trenching on core federal powers reserved to the federal government by the AEA. It is another thing to do as Virginia Uranium wishes and impose the same exacting scrutiny on state laws prohibiting an activity like mining far removed from the NRC’s historic powers.<sup>229</sup>

Rather, such scrutiny requires a “clearer congressional mandate” because of the seriousness of “intrusion into state sovereignty.”<sup>230</sup> Justice Gorsuch pointed out that a later decision on the preemptive effect of the AEA on state tort law declined to inquire into state legislative purposes—despite state tort law’s purpose of regulating public safety.<sup>231</sup> Later Supreme Court case law had similarly expressed willingness to reconsider the appropriateness of looking into state legislative purpose.<sup>232</sup> In examining field preemption, Justice Gorsuch wrote that what matters is “*what* the State did, not *why* it did it.”<sup>233</sup>

The Justice also expressed concern that an expansive preemption doctrine would threaten principles of federalism and individual liberty.<sup>234</sup> In this view, in-

227. 42 U.S.C. § 2021(k) (2012); *Virginia Uranium*, 139 S. Ct. at 1902-03 (Gorsuch, J.) (plurality opinion) (“The company suggests that, properly read, the provision greatly expands the preemptive effect of the AEA and demands the displacement of any state law (touching on mining or any other subject) if that law was enacted for the purpose of protecting the public against ‘radiation hazards.’ And, the company adds, Virginia’s law bears just such an impermissible purpose. In our view, this reading nearly turns the provision on its head.”).

228. *Virginia Uranium*, 139 S. Ct. at 1902-03 (Gorsuch, J.) (plurality opinion); *see id.* at 1912 (Ginsburg, J., concurring) (agreeing with the plurality that § 2021(k) limits the scope of federal preemption).

229. *Id.* at 1904 (Gorsuch, J.) (plurality opinion).

230. *Id.* (quoting *Medtronic, Inc. v. Lohr*, 518 U.S. 470, 488 (1996) (plurality opinion)).

231. *Id.* at 1905 (Gorsuch, J.) (plurality opinion) (citing *Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238, 251 (1984)).

232. *Id.* at 1905 (Gorsuch, J.) (plurality opinion) (citing *English v. Gen. Elec. Co.*, 496 U.S. 72, 84-85 n.7 (1990)).

233. *Id.* at 1905-06 (Gorsuch, J.) (plurality opinion) (emphasis in original) (collecting cases).

234. *Id.* at 1906 (Gorsuch, J.) (plurality opinion).

quiring into state legislative purpose would “stifle deliberation in state legislatures and encourage resort to secrecy and subterfuge.”<sup>235</sup> This would “inhibit the sort of open and vigorous legislative debate that our Constitution recognizes as vital to testing ideas and improving laws.”<sup>236</sup> The Justice questioned the possibility of discerning any one particular purpose of legislation, due to the complex and compromise-driven nature of the legislative process.<sup>237</sup>

Similar skepticism was evident regarding conflict preemption. Virginia Uranium had argued that Virginia’s mining law stood as an obstacle to achieving Congress’s objectives, disrupting the balance Congress struck between developing nuclear power and mitigating its safety and environmental issues.<sup>238</sup> A mining ban, it contended, would “undermine” the NRC’s regulatory authority downstream.<sup>239</sup>

Justice Gorsuch, however, rejected as “simplistic” the argument that such a broad Congressional intent could be read into the AEA, noting that the preemption doctrine cannot “elevate abstract and unenacted legislative desires above state law.”<sup>240</sup> He added, “[e]fforts to ascribe unenacted purposes and objectives to a federal statute face many of the same challenges as inquiries into state legislative intent.”<sup>241</sup> Importantly, “any ‘[e]vidence of pre-emptive purpose,’ whether express or implied, must therefore be ‘sought in the text and structure of the statute at issue.’”<sup>242</sup>

Justice Ginsburg, joined by Justices Kagan and Sotomayor, concurred in the judgment but articulated a more reserved view of preemption.<sup>243</sup> Justice Ginsburg declined to join Justice Gorsuch’s stark rejection of inquiry into either state or federal legislative motives, viewing it as outside the scope of the case.<sup>244</sup> Rather, she wrote, the case could be resolved under existing preemption precedent.<sup>245</sup> In her view, field preemption was plainly not evident because the statute, by its text, did not regulate mining. Rather, she noted, the controlling provision of the AEA invoked federal regulation only when source material is “remov[ed] from its place of deposit in nature.”<sup>246</sup> Nor did conflict preemption apply, as compliance with the state law did not make compliance with federal law impossible.<sup>247</sup> Nor was there

235. *Id.*

236. *Id.*

237. *Id.* at 1906-07 (Gorsuch, J.) (plurality opinion).

238. *Id.* at 1907 (Gorsuch, J.) (plurality opinion).

239. *See id.*

240. *Id.*

241. *Id.*

242. *Id.* (quoting *CSX Transp., Inc. v. Easterwood*, 507 U.S. 658, 664 (1993)).

243. *Id.* at 1909 (Ginsburg, J., concurring).

244. *Id.*

245. *Id.*

246. *Id.* at 1912 (Ginsburg, J., concurring).

247. *Id.* at 1915-16 (Ginsburg, J., concurring).

express preemption, as nothing in the statute's text purported to preempt the law at issue.<sup>248</sup>

Consistent with her inclination not to inquire into legislative motive, Justice Ginsburg pointed out that in no case so far had the Court truly rested preemption on "the purposes for which state laws were enacted."<sup>249</sup> Likewise, she rejected Virginia Uranium's assertion that the mining ban was preempted because it was a pretext for regulating the radiological safety hazards of milling and tailings storage.<sup>250</sup>

The Justice also wrote that "[a] state law regulating an upstream activity within the State's authority is not preempted simply because a downstream activity falls within a federally occupied field."<sup>251</sup> In Justice Ginsburg's view, legislative motive was simply irrelevant. Maybe the Commonwealth's mining ban was a pretext; maybe not. The Commonwealth simply was not regulating a preempted field. Formally, Justice Ginsburg's view is not so different from Justice Gorsuch's: both give state legislative motive no weight. But it is plausible that a nefarious state purpose with threadbare pretextual cover might shift Justice Ginsburg's calculus, given her reluctance to *completely* disavow relying on state legislative purpose. Alternatively, purpose might become relevant if a state seeks to regulate an area already closely regulated by the federal government. But even there, under Justice Ginsburg's view, state legislative purpose would not seem to carry much weight, as field and conflict preemption analyses based on the scope of the federal law in question would suffice. Thus, despite differing rationales, six Justices did not give state legislative purpose much importance.

Chief Justice Roberts, joined by Justices Breyer and Alito, dissented and espoused a more traditional view consistent with preemption as "purposivism's last refuge."<sup>252</sup> In their view, the Commonwealth sought to improperly *indirectly* regulate a preempted field:

[T]he question we agreed to address is whether a State can purport to regulate a field that is not preempted (uranium mining safety) as an indirect means of regulating other fields that are preempted (safety concerns about uranium milling and tailings). And on that question, our precedent is clear: The AEA prohibits state laws that have the purpose and effect of regulating preempted fields.<sup>253</sup>

248. *Id.* at 1914 (Ginsburg, J., concurring).

249. *Id.* at 1913 (Ginsburg, J., concurring).

250. *Id.* at 1914 (Ginsburg, J., concurring).

251. *Id.* at 1914-15 (Ginsburg, J., concurring) (citing *Nat'l Meat Ass'n v. Harris*, 565 U.S. 452 (2012)).

252. *See id.* at 1916-20 (Roberts, C.J., dissenting). For an example of that view of preemption, *see* Michael Ramsey, Note, *Preemption as Purposivism's Last Refuge*, 126 HARV. L. REV. 1056 (2013).

253. *See* 139 S. Ct. at 1916 (Roberts, C.J., dissenting).

In their view, the uranium mining ban, although seemingly an exercise of traditional state power in a federally unregulated area, was in reality an attempt to regulate uranium milling and tailing due to radiological safety concerns.<sup>254</sup> The dissenters argued that conflict is not necessary for preemption, but that a state law is preempted “when its *purpose* is to regulate within a preempted field.”<sup>255</sup>

The controlling opinions in *Virginia Uranium* further constrain the Court’s already-limited scrutiny of state motives set forth in *Pacific Gas & Electric Co. v. State Energy Resources Conservation & Development Commission*.<sup>256</sup> In *Pacific Gas*, the Court rejected a preemption challenge to a California law that required adequate storage space for nuclear waste as a condition for permitting a nuclear power plant. The Court found that the Federal Atomic Energy Act covered the field of nuclear safety concerns, and that for preemption analysis, it was therefore necessary to determine whether there was a non-safety rationale for the state law.<sup>257</sup> The state maintained, and a committee report confirmed, that there was such a rationale—an economic one, in that running out of storage space for fuel would lead to high costs to contain the problem or address a reactor shutdown.<sup>258</sup> The Court declined to engage in further inquiry into whether the state’s true motives might have been safety-based, given the state’s authority to halt the construction of new nuclear plants on economic grounds.<sup>259</sup>

The Court in *Virginia Uranium* noted that in *Pacific Gas*, the state law had directly prohibited a regulated activity. In *Virginia Uranium*, where the state law prohibited an activity “far removed” from the NRC’s powers, the Court declined to take on even *Pacific Gas*-level scrutiny into the state’s motives.<sup>260</sup>

It is entirely plausible that the Commonwealth of Virginia meant to curtail nuclear safety harms and regulate the storage of nuclear waste in its borders when it enacted its ban—even likely, given the extremely high economic value of mining its uranium deposit.<sup>261</sup> Yet six Justices from across the ideological spectrum found the state law not preempted.

254. See *id.* at 1917 (Roberts, C.J., dissenting).

255. *Id.* at 1917 (Roberts, C.J., dissenting) (citing *Pacific Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm’n*, 461 U.S. 190, 212-13 (1983)); see also *id.* at 1917-18 (“For example, even though a State may generally regulate its roads, it may not shut down all of the roads to a nuclear power plant simply because it disagrees with the NRC’s nuclear safety regulations.”).

256. 461 U.S. 190, 212 (1983).

257. *Id.* at 213 (“A state prohibition on nuclear construction for safety reasons would also be in the teeth of the Atomic Energy Act’s objective to insure that nuclear technology be safe enough for widespread development and use and would be pre-empted for that reason”).

258. *Id.*

259. *Id.* at 216.

260. *Virginia Uranium*, 139 S. Ct. at 1904-05 (Gorsuch, J.) (plurality opinion).

261. See Cale Jaffe, *Virginia’s Uranium Mining Battle Flips Traditional Views of Federal and State Power*, CONVERSATION (Jan. 11, 2019), <http://theconversation.com/virginias-uranium-mining-battle-flips-traditional-views-of-federal-and-state-power-109167>.

Thus, on the issue of preemption there may be a jurisprudential alliance between the Court's formalistic conservatives and the liberals more inclined to hewing close to the text. The conservative wing—and especially the Scalia-inspired, ostensibly textualist wing—grew with the confirmation of Justice Kavanaugh and may grow further yet. Conservatives are not the only potential allies of states, though. For instance, it was noted that Justice Kagan at oral argument seemed to share Justice Kavanaugh's reluctance to intrude onto traditional state authority.<sup>262</sup> The result may be a freer rein for states in efforts to use their sovereignty to push back against federal-level climate apathy.

### B. *Express Preemption and the "Relating To" Clauses*

Express preemption of a state-based vehicle electrification mandate would be grounded in either the CAA's or EPCA's "relating to" clauses.

The CAA forbids any state from enacting a "standard relating to the control of emissions from new motor vehicles or new motor vehicle engines."<sup>263</sup> EPCA forbids enacting "a law or regulation related to fuel economy standards . . . for automobiles" when a federal standard covers the same vehicles.<sup>264</sup>

A challenger could argue that a vehicle electrification mandate is "related to" emissions (unlike gasoline powered cars, EVs do not have emissions) and point to the broad language of CAA § 209(a) prohibiting state regulation "related to" emissions.<sup>265</sup> Likewise, a challenger could argue that a vehicle electrification mandate is "related to" fuel economy standards and expressly proscribed under EPCA, on grounds that an effect of a vehicle electrification mandate would likely be to improve fuel economy.<sup>266</sup>

"Related to" phrases in federal legislation have proven to be an interpretive headache, and courts have construed this preemption language in federal statutes with varying degree of breadth.<sup>267</sup> The CAA's "relating to" provision has been interpreted in the preemption context.<sup>268</sup> The Second Circuit held that Zero Emis-

262. *See id.*

263. 42 U.S.C. § 7543(a) (2018); *see also supra* Section II.B.1.

264. 49 U.S.C. § 32919(a) (2018); *see also supra* Section II.B.2.

265. *See* 42 U.S.C. § 7543(a).

266. It is not necessarily the case that electric vehicles are more fuel efficient than gasoline- or diesel-powered vehicles. Electric vehicles vary widely in efficient use of fuel. *See, e.g.,* Jim Gorzelany, *These Are the Electrified Rides That Are Rated as the Most Energy Efficient*, MY EV, <https://www.myev.com/research/comparisons/evs-with-the-best-mpge-ratings-for-2019> (last visited Feb. 20, 2020). It is entirely conceivable that upcoming electric vehicle models would be less fuel efficient than some fossil fuel vehicles. Electric vehicles would still have to satisfy the fuel economy standards (MPGe) set forth by the EPA. *See supra* note 180.

267. *See, e.g.,* Meltzer, *supra* note 147, at 20-25.

268. *See, e.g.,* Steven G. Davison, *Regulation of Emission of Greenhouse Gases and Hazardous Air Pollutants from Motor Vehicles*, 1 PITT. J. ENVTL. & PUB. HEALTH L. 1, 37-38 (2006).

sion Vehicle (ZEV) regulations that were not covered by CAA § 177—which authorizes states to adopt California’s standards instead of federal requirements<sup>269</sup>—constituted prohibited emissions standards under the CAA. In *American Automobile Manufacturers Ass’n v. Cahill*,<sup>270</sup> the court found that “the ZEV sales requirement must be considered a standard ‘relating to the control of emissions.’ ZEV, after all, stands for ‘zero-emission vehicle,’ and a requirement that a particular percentage of vehicle sales be ZEVs has no purpose other than to effect a general reduction in emissions.”<sup>271</sup>

Unlike the proposed Washington legislation, the ZEV regulations in *Cahill* were directed squarely at emissions. After all, it was in the name. A court would be hard-pressed to conclude that a bill or regulation including the phrase “zero-emission” was *not* “related to” emissions. Electric vehicles were an emerging technology at the time, and their non-emissions related benefits that are the focus of Washington’s bill were scarcely understood or considered. The New York legislation was designed to be essentially identical to a prior California law, adopted pursuant to California’s Clean Air Act waiver in explicit contemplation of emissions reduction.<sup>272</sup> The Washington legislation, in contrast, is aimed at other benefits and purposes, and the emissions reductions are incidental. Vehicles are not directed to become zero-emission—they are directed to become electric. The legislation makes no mention of emissions-related benefits. Rather, the bases for the legislation are non-emissions-related ones, such as economic benefits, water quality, and the like.<sup>273</sup>

Under EPCA, Jonathan Adler argues that a requirement to sell zero emission vehicles is likely not a requirement “relating to” fuel economy either.<sup>274</sup> The Supreme Court has recognized limits on the scope of “related to” preemption language. In *New York Conference of Blue Cross & Blue Shield Plans v. Travelers Insurance Co.*, the Court pointed out that “[i]f ‘relate to’ were taken to extend to the furthest stretch of its indeterminacy, then for all practical purposes pre-emption

269. Clean Air Act § 177, 42 U.S.C. § 7507 (2018).

270. 152 F.3d 196, 200 (2d Cir. 1998).

271. *Id.* at 200. In a decision following the Second Circuit’s decision in *American Automobile Manufacturers Ass’n*, the First Circuit in *Association of International Automobile Manufacturers v. Mass. Department of Environmental Protection*, 208 F.3d 1, 6 (1st Cir. 2000), embraced a broad preemption standard, finding that “whether a regulation effects a small or great impact on overall emissions levels is a question of degree, not one of kind.”

272. *Am. Automobile Mfrs. Ass’n*, 152 F.3d at 199.

273. *See supra* Section I.D.3.

274. *See Adler, supra* note 109 (“The Trump Administration is on weaker ground insofar as it seeks to prevent California from requiring automakers to sell Zero Emission Vehicles (ZEVs, i.e. electric cars) in the state. While ZEVs reduce greenhouse gas emissions, they reduce emissions of traditional pollutants as well. Thus, this requirement fits more comfortably into the relevant CAA criteria. For the same reasons, I think it is difficult to argue that the ZEV requirements are preempted under the EPCA as standards ‘related to’ fuel economy too.”).

would never run its course,” and this would “read the presumption against preemption out of the law whenever Congress speaks to the matter with generality.”<sup>275</sup> Instead, the Court ruled that states should “go beyond the unhelpful text and the frustrating difficulty of defining its key term, and look instead to the objectives of the . . . statute as a guide to the scope of the state law that Congress understood would survive.”<sup>276</sup> The Court’s decision limited its previously broad construction of the preemptive “related to” language of the federal ERISA statute.<sup>277</sup>

In *Green Mountain Chrysler Plymouth Dodge Jeep v. Crombie*,<sup>278</sup> a Vermont federal district court considered whether California emissions standards adopted by Vermont under a pending EPA waiver were preempted under EPCA, which does not have a state waiver process. The plaintiffs had argued that California’s waiver under CAA § 209(b), and other states’ right to adopt California’s waiver under CAA § 177, did not exempt either state’s regulation from preemption under the EPCA of state regulation “related to” fuel economy standards.<sup>279</sup>

The court in *Green Mountain* found that the Vermont statute was not preempted, assuming California was granted an EPA waiver for its statute, given the traditionally shared role of the federal government and the states in regulating greenhouse gases (GHGs).<sup>280</sup> Even though the regulation of fuel economy standards is one of the most important mechanisms for reducing GHGs from motor vehicles, the court rejected preemption on the basis that the Vermont rules were broader than just fuel economy standards: they concerned not only carbon dioxide, a direct waste product of fuel, but “carbon dioxide equivalents” too (that is, other GHGs).<sup>281</sup> Thus, the court reasoned, “while there is a near-perfect correlation between fuel consumed and carbon dioxide released, there is no such perfect correlation between fuel consumed and emissions of hydrocarbons or carbon monoxide,” a fact which “undermines the assertion that the GHG regulation is nothing more

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275. N.Y. State Conference of Blue Cross & Blue Shield Plans v. Travelers Ins. Co., 514 U.S. 645, 655 (1995).

276. *Id.* at 656. The CAA is silent on electric vehicle mandates and the regulation of intrastate energy distribution, storage, and use.

277. See Meltzer, *supra* note 147, at 20-21, 23. For example, the Court considered a state statute that automatically revoked designations of spouses as beneficiaries of non-probate assets upon divorce. *Id.* at 23. The Court found the law preempted because it would hypothetically require ERISA plan administrators to pay beneficiaries according to state law, which ERISA forbade. *Id.* But, as Justice Breyer pointed out, such a broad interpretation would also seemingly preempt state slayer statutes, which bar killers from receiving benefits from those they kill. *Id.*

278. *Green Mountain Chrysler Plymouth Dodge Jeep v. Crombie*, 508 F. Supp. 2d 295, 343-89 (D. Vt. 2007).

279. *Id.* at 301.

280. *Id.* at 350.

281. *Id.* at 352.

than a fuel economy standard, since it encompasses emissions which do not correlate with fuel economy.”<sup>282</sup>

*New York Conference’s* narrow reading of “related to” language was cited by the court in *Green Mountain*, when it ruled that while the vehicle standards in question affected fuel economy, the regulations were primarily directed at GHG emissions and were not sufficiently related to fuel economy standards to be preempted.<sup>283</sup>

In finding no de facto fuel economy regulation, the court noted, “Congress’s undoubted intent was to make the setting of fuel economy standards exclusively a federal concern, but it enacted EPCA against the backdrop of other regulations that affected motor vehicles and could have an effect on fuel economy, such as emissions standards under Section 202 of the CAA, emissions standards under Section 209(b) of the CAA, motor vehicle safety standards and noise emission standards. See Pub. L. No. 94-163, Sec. 502., Stat. (1975).”<sup>284</sup>

*Green Mountain*, which came after the Supreme Court struck down diesel fleet rules in *EMA*, illustrates how courts can narrowly construe the degree to which federal and state statutes conflict, especially when the federal statute fails to explicitly prohibit state regulation in the field. With respect to the Washington legislation, a court following *Green Mountain’s* analysis could easily construe the preemption provision of the CAA and EPCA narrowly and find that electric vehicle mandates are not within the scope of the statute.

Consider, too, the Court’s increasingly formalist and textualist leanings,<sup>285</sup> under which it would be reasonable to construe the EPCA, CAA, and the Washington legislation as regulating formally distinct spheres: fuel economy standards, emissions control, and vehicle power sources, respectively. A judge faithful to this view—a position that also tends to accompany a skepticism of expansive federal power—could likewise conclude that had Congress wanted to forbid any legislation with a mere “impact on” emissions or fuel economy standards, it could have done so. Likewise, Congress could have forbidden any state legislation that “had the effect of a standard relating to” emissions or fuel economy. But Congress did not do so, and to read “related to” to mean “touching upon” would read “related to” out of the statute.<sup>286</sup> At a minimum, Congress did not proscribe such legislation, and it could have.<sup>287</sup>

282. *Id.* at 352.

283. *Id.* at 398.

284. *Id.* at 354.

285. See *supra* note 262 and accompanying text.

286. Cf. *Morales v. Trans World Airlines, Inc.*, 504 U.S. 374, 388 (1992).

287. Would a court turn to the interpretation of the EPA or another federal agency of the “related to” sections in the CAA or EPCA? Probably not. There is a growing skepticism of deference to statutory interpretation by federal agencies. Recent decisions, including *Smith v. Berryhill*, 139 S. Ct. 1765, 1778-79 (2019) and *Pereira v. Sessions*, 138 S. Ct. 2105, 2113-14 (2018), have narrowed traditional *Chevron* deference to federal agency interpretations of ambiguous statutes. See *Chevron U.S.A. v. Nat. Res. Def. Council*, 467 U.S. 837 (1984) (establishing the doctrine of deference to agencies); see also Joshua

It has been argued that despite its supposed ideological constraints on judicial decision-making, textualism leaves ample room for judicial value calls.<sup>288</sup> The phrase “relating to” is not unambiguous, either: Merriam-Webster’s dictionary gives definitions as broad as meaning simply “about” or “connected to.”<sup>289</sup> Further, judicial realism can come into play, as in Chief Justice Roberts’ dissent in *Virginia Uranium*, which pointed out that despite the Commonwealth’s legislation formally being outside the scope of the AEA, it was in reality an indirect way to accomplish the same goal.<sup>290</sup> That said, the Chief Justice’s view in *Virginia Uranium* only garnered three votes.<sup>291</sup>

Regardless, the proposed Washington legislation on its face regulates the mechanism of propulsion and power of vehicles for explicit purposes of benefiting Washington’s economy, protecting plants, fish and wildlife, and preventing groundwater contamination. In light of this textual anchoring, a court being consistent with the narrow view of preemption advanced by both Justices Gorsuch and Ginsburg in *Virginia Uranium* would be hard-pressed to conclude that rather than relating to those aspects, the bill relates to emissions.<sup>292</sup>

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The presumption against preemption underlies all preemption analysis. A precept of preemption law is that “when the text of a pre-emption clause is susceptible of more than one plausible reading, courts ordinarily ‘accept the reading that disfavors pre-emption.’”<sup>293</sup> A finding of preemption requires a “high threshold” to be met “if a state law is to be pre-empted for conflicting with the purposes of a federal Act. Any conflict must be ‘irreconcilable . . .’”<sup>294</sup> “[H]ypothetical or potential conflict[s]” do not meet this threshold,<sup>295</sup> and courts are heavily discouraged from

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Matz, *The Imminent Demise of Chevron Deference?*, TAKE CARE (June 21, 2018), <https://takecareblog.com/blog/the-imminent-demise-of-chevron-deference> (discussing the Court’s narrowing of *Chevron*).

288. Richard H. Fallon, Jr., *The Meaning of Legal “Meaning” and Its Implications for Theories of Legal Interpretation*, 82 U. CHI. L. REV. 1235, 1260 (2015).

289. *Relate To*, MERRIAM-WEBSTER, <https://www.merriam-webster.com/dictionary/relate%20to> (last visited Aug. 5, 2019).

290. See *supra* Section III.A.

291. *Virginia Uranium, Inc. v. Warren*, 139 S. Ct. 1894, 1916 (2019).

292. Indeed, if it were, legislation “relating to emissions” would conceivably include anything that would incidentally reduce or increase emissions, regardless of the main purpose: for instance, establishing new bike paths, funding public transportation, building new roads, removing old roads, timed traffic lights, idling prohibitions, and the like.

293. *Altria Grp. v. Good*, 555 U.S. 70, 77 (2008) (quoting *Bates v. Dow Agrosciences*, 544 U.S. 431, 449 (2005)).

294. *Gade v. Nat’l Solid Wastes Mgmt. Ass’n*, 505 U.S. 88, 110 (1992) (Kennedy, J., concurring in part and concurring in judgment) (quoting *Rice v. Norman Williams Co.*, 458 U.S. 654, 659 (1982)).

295. *Rice v. Norman Williams Co.*, 458 U.S. 654, 659 (1982).

“seeking out conflicts between state and federal regulation where none clearly exists.”<sup>296</sup>

The Court recently affirmed its reluctance to preempt state law, approvingly citing language from *Medtronic v. Lohr* to the effect that “preemption of state laws represents ‘a serious intrusion into state sovereignty.’”<sup>297</sup>

In one case, the Supreme Court declined to apply the presumption against preemption, but that case is distinguishable. In *Puerto Rico v. Franklin California Tax-Free Trust*<sup>298</sup> there was no ambiguity as to coverage of the express preemption clause. The preemption clause applied to states, and the only question was whether Puerto Rico was a state.<sup>299</sup> The Court explained:

Resolving whether Puerto Rico is a “State” for purposes of the preemption provision begins “with the language of the statute itself,” and that “is also where the inquiry should end,” for “the statute’s language is plain.” And because the statute “contains an express pre-emption clause,” we do not invoke any presumption against pre-emption but instead “focus on the plain wording of the clause, which necessarily contains the best evidence of Congress’ pre-emptive intent.”<sup>300</sup>

Whether Puerto Rico is a state subject to a preemption provision covering states is a question of definition. In contrast, whether the Washington statute requiring that vehicles be powered by electricity “relates to” vehicle emissions or fuel economy standards is a question of Congressional intent in crafting the CAA and EPCA preemption provisions. In the case of the Washington legislation, the Court would be more likely to find the lack of a “clear Congressional command” that it found in *Virginia Uranium*,<sup>301</sup> meriting a presumption against preemption.

### C. Implied Preemption of Vehicle Electrification Legislation

Even if a federal statute does not explicitly preempt a state statute, a court can invalidate a statute when preemption is implied through field preemption or con-

296. *Huron Portland Cement Co. v. City of Detroit*, 362 U.S. 440, 446 (1960).

297. *Virginia Uranium, Inc. v. Warren*, 139 S. Ct. 1894, 1904 (2019) (quoting *Medtronic, Inc. v. Lohr*, 518 U.S. 470, 488 (1996) (plurality opinion)).

298. *See Puerto Rico v. Franklin California Tax-Free Trust*, 136 S. Ct. 1938, 1946 (2016).

299. In *Franklin California Tax-Free Trust*, the express preemption provision forbade state municipal bankruptcy laws: namely, “a State law prescribing a method of composition of indebtedness of [a] municipality may not bind any creditor that does not consent to such composition” and “a judgment entered under such a law may not bind a creditor that does not consent to such composition.” *Id.* at 1945 (citations omitted). But was Puerto Rico a “State”? It was on this definitional question that the Court rejected the presumption against preemption. *See id.* at 1945-46.

300. *See Franklin California Tax-Free Trust*, 136 S. Ct. at 1946 (citations omitted).

301. *Virginia Uranium*, 139 S. Ct. at 1905.

flict preemption.<sup>302</sup> In field preemption, a federal regulatory scheme is “so pervasive as to make reasonable the inference that Congress left no room” for state law.<sup>303</sup> In conflict preemption, “compliance with both federal and state regulations is a physical impossibility” or a state law “stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress.”<sup>304</sup>

### 1. Field Preemption

Field preemption does not bar the Washington vehicle electrification mandate for two key reasons: 1) the bill concerns traditional state functions, and the CAA contemplates a role for state governments in air pollution control; and 2) even if the federal government did occupy the entire field of emissions regulation, the proposed Washington legislation does not regulate emissions.

Field preemption asks whether a state is trying to push its way into a field that Congress has designated exclusively to the federal government.<sup>305</sup> If so, the state is out of luck. Absent explicit congressional intent, federal exclusivity may be inferred from a “pervasive” scheme of federal regulation that leaves “no room for a state to supplement,” or if “the federal interest is so dominant” as to preclude enforcement of state laws on the same subject.<sup>306</sup> Hesitation to infer field preemption is warranted if the field touches on traditional state powers.<sup>307</sup>

In *Freightliner Corp. v. Myrick*,<sup>308</sup> the Supreme Court considered whether a state cause of action for failure to include an anti-lock brake system (ABS) in the design of tractor-trailers was preempted by federal truck safety law set forth in the National Traffic and Motor Vehicle Safety Act of 1966 (Safety Act) and its implementing regulations. Pursuant to the Safety Act, the federal government issued a standard imposing stopping distances for vehicles with air brakes that in effect required tractor-trailers to have ABS devices.<sup>309</sup> After a court decision rejected the standard on a finding that the ABS devices potentially created additional hazards, the standard was amended to so that stopping-distance requirements no longer applied to tractor-trailers.<sup>310</sup>

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302. The Supreme Court has described field preemption “as a species of conflict pre-emption: A state law that falls within a pre-empted field conflicts with Congress’ intent (either express or plainly implied) to exclude state regulation.” *English v. Gen. Elec. Co.*, 496 U.S. 72, 79-80 n.5 (1990).

303. *Gade v. Nat’l Solid Wastes Mgmt. Ass’n*, 505 U.S. 88, 98 (1992).

304. *Id.*

305. *See English*, 496 U.S. at 79.

306. *Id.*

307. *Id.*

308. *Freightliner Corp. v. Myrick*, 514 U.S. 280 (1995).

309. *Id.* at 284-85.

310. *Id.* at 285.

In addressing the question of field preemption, the Court found that, although the Safety Act covered the field of motor vehicle safety standards, there was no conflict between federal and state law because the Safety Act failed to address the need for ABS devices.<sup>311</sup> The Court noted that the standard “has nothing to say concerning ABS devices one way or the other,” and the federal government had not ordered truck manufacturers to refrain from using ABS devices.<sup>312</sup> It added, “[a] finding of liability against petitioners would undermine no federal objectives or purposes with respect to ABS devices, since none exist.”<sup>313</sup>

The Washington legislation could be defended on a similar basis. Just as the state standard in *Freightliner* required tractor-trailers to be manufactured with a certain feature (antilock brakes) not explicitly covered in the federal law on highway safety, so the Washington legislation requires light duty vehicles to be manufactured with a certain feature (an electric power system) neither mandated nor prohibited by the CAA or EPCA.

The Supreme Court has avoided finding preemption of state regulation in areas traditionally within state control when not directly contrary to the express terms of a federal statute. In *Pacific Gas*,<sup>314</sup> the Supreme Court upheld a state law conditioning construction approval for nuclear power plants on availability of adequate storage and disposal facilities.<sup>315</sup> The Court found that the Federal Atomic Energy Act “occupied the entire field of nuclear safety concerns, except the limited powers expressly ceded to the States.”<sup>316</sup> Therefore the test of pre-emption was whether “the matter on which the State asserts the right to act is in any way regulated by the Federal Act.”<sup>317</sup> It noted that a state prohibition or moratorium on nuclear construction grounded on safety concerns would fall “squarely within the prohibited field.”<sup>318</sup> However, if the state prohibition was grounded on non-safety concerns, it would not be preempted.<sup>319</sup>

Because regulation of power generation relating to need, reliability, and cost had traditionally been left to the states, and because California’s law purported to regulate on economic grounds, the Court applied the Atomic Energy Act’s

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311. *Id.* at 289.

312. *Id.*

313. *Id.* at 289-90.

314. 461 U.S. 190, 212 (1983).

315. *See id.* at 205.

316. *Id.* at 212-13. The federal law’s savings clause stated, “Nothing in this section shall be construed to affect the authority of any State or local agency to regulate activities for purposes other than protection against radiation hazards.” *Id.* at 210.

317. *Id.* at 213 (citation omitted).

318. *Id.*

319. *See id.* at 216.

preemption provision relating to safety regulation narrowly.<sup>320</sup> In effect, it found that state economic grounds for prohibiting construction of a nuclear plant could provide a sufficient basis for rejecting preemption, despite a federal statute covering the field of radiological safety aspects involved in the construction and operation of a nuclear plant.<sup>321</sup>

In *Virginia Uranium*,<sup>322</sup> the Supreme Court held that because the AEA did not specifically preempt uranium mining regulation, Virginia's law was not preempted. The Court reached this result even though the ban affected aspects of the uranium refinement process that were regulated by the AEA, and even though the plaintiff had alleged that avoidance of these federally preempted aspects was the reason that the state had passed the uranium mining ban in the first instance.<sup>323</sup>

In the case of vehicle electrification legislation, the state of Washington can show numerous state regulatory interests addressed by the proposal. These interests, cited in the first section of the legislation, include:

- 1) Job creation and economic development benefits of charging network buildout;
- 2) Consumer savings from reduced vehicle maintenance costs and downward pressure on electric utility rates;
- 3) Ability for electric vehicle batteries to serve as electrical grid load balancing and energy storage resources;
- 4) Reduced soil and groundwater pollution;  
Increased electricity generation; and
- 5) Lower electric rates.<sup>324</sup>

The CAA is silent on all these benefits, none of which relates to vehicle emissions, and which together constitute a sufficient independent legal basis for avoiding preemption.

The proposed Washington legislation would have an extensive impact on electrical generation and use. States have primary jurisdiction over regulation of intrastate electricity generation and distribution.<sup>325</sup> If viewed as a measure to enhance intrastate power markets, the statute would fall squarely within a traditional area of state policy and regulatory dominance.

Furthermore, it can be argued that given that the CAA (and EPCA) was passed long prior to electric vehicles becoming a viable transportation option,

320. *Id.*; see also *Oneok, Inc. v. Learjet, Inc.*, 135 S. Ct. 1591, 1599-1600 (2015) (state antitrust claims against gas pipeline companies were not field preempted because while the Natural Gas Act regulates wholesale prices of natural gas, retail price regulation is a state function).

321. *Id.*

322. *Virginia Uranium, Inc. v. Warren*, 139 S. Ct. 1894 (2019) (Gorsuch, J.) (plurality opinion).

323. See *id.* at 1902-04.

324. See *supra* Section I.D.3.

325. See, e.g., *Fed. Energy Reg. Comm'n v. Elec. Power Supply Ass'n*, 136 S. Ct. 760, 767-68 (2016) (FPA does not permit FERC to regulate intrastate energy commerce).

preempting states' rights to mandate electrification could not have been the "clear and manifest purpose of Congress."<sup>326</sup> Likewise, finding field preemption here would mean looking beyond the text of the CAA and declaring that the "field" in question was not emissions, but methods of propulsion, despite the Act's silence on this matter.

Consider also the purpose provisions and the savings clause in the CAA.<sup>327</sup> The CAA did not reserve even air pollution control exclusively to the federal government, and, indeed, it explicitly acknowledged that state and local governments played a role.<sup>328</sup> In so declaring, the CAA sought to encourage state acts "consistent with the provisions of [the CAA], for pollution prevention."<sup>329</sup> This cannot be squared with a view that Congress meant to occupy the field entirely.

Even if Congress *did* occupy the field of emissions, field preemption wouldn't proscribe regulation upstream of the preempted field, such as a requirement for electric propulsion. Again, *Virginia Uranium* is telling. There, the Commonwealth regulated uranium mining, which was upstream of the federally occupied field of disposal of nuclear mining waste.<sup>330</sup> As Justice Ginsburg noted in her *Virginia Uranium* concurrence, "A state law regulating an upstream activity within the State's authority is not preempted simply because a downstream activity falls within a federally occupied field."<sup>331</sup>

## 2. Conflict Preemption

Conflict preemption is also unlikely. There is no actual conflict between the federal legislation and the Washington bill—indeed, compliance with both is straightforward, and there is insufficient statutory text to ground an "obstacle" that the Washington bill would create.

A state law is invalid under the principle of conflict preemption if it actually conflicts with a federal statute or regulation. Even without actual conflict, a state law is invalid if it "stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress."<sup>332</sup> But mere state-federal "tension"

326. See *Altria Grp., Inc. v. Good*, 555 U.S. 70, 77 (2008) (quoting *Rice v. Santa Fe Elevator Corp.*, 331 U.S. 218, 230).

327. See *supra* Section II.B.1.

328. See *supra* Section II.B.1.

329. 42 U.S.C. § 7401(c) (2012).

330. See *supra* Section III.A.

331. *Virginia Uranium, Inc. v. Warren*, 139 S. Ct. 1894, 1915 (2019) (Ginsburg, J., concurring).

332. *Int'l Paper Co. v. Ouellette*, 479 U.S. 481, 492 (1987); *Virginia Uranium*, 138 S. Ct. at 1907 (Gorsuch, J.) (plurality opinion). *But see* Meltzer, *supra* note 147, at 35 (describing Justice Thomas's criticism of obstacle preemption generally).

isn't enough to constitute an obstacle for preemption purposes, especially if a state is exercising its traditional police powers.<sup>333</sup>

A state statute is not shielded from (nor subjected to) preemption merely because it expresses a different objective than the federal statute.<sup>334</sup> To the extent that the state statute intrudes upon Congressional objectives as expressed by the federal statute, it is preempted.<sup>335</sup> Nevertheless, a finding of conflict preemption “turns on the identification of ‘actual conflict,’” and a court “should not find preemption too readily in the absence of clear evidence of a conflict.”<sup>336</sup> Yet the rules are not clear cut, as what constitutes a sufficient obstacle to ground preemption is “‘a matter of judgment,’ to be informed by reference to the overall federal statutory scheme.”<sup>337</sup>

Opponents of the Washington legislation would likely argue that section 209 of the CAA contemplates federal-only emission standards, with exceptions only for California via waiver and the section 177 states.<sup>338</sup> Under this view, the purpose of section 209 of the CAA would be frustrated by a state law that mandates vehicle electrification, because it would have an *effect* on emissions. Under this theory, only the federal government could regulate anything to do with auto emissions, and the proposed Washington bill, which would have an impact on emissions, would result in an unwanted fracturing of the national vehicle emission standards.

But this is a stretch, much like the one that proved too far for the Court in *Virginia Uranium*. There, the plaintiff contended that conflict preemption arose from the Commonwealth of Virginia's regulation of uranium mining. Virginia Uranium argued that regulation upset the cost-benefit balance that Congress had imposed via a uniform regulatory scheme.<sup>339</sup> And the Court rejected that argument as “simplistic,” declaring that finding preemption would “elevate abstract and unenacted legislative desires above state law.”<sup>340</sup> Here, as in *Virginia Uranium*, there simply isn't clear statutory text to indicate that a state vehicle electrification regulation would upset some imagined Congressional balance.

Further, consider the statutory context of the CAA. First, the overriding purpose of the Clean Air Act is to clean the air, not mandate a 100%-unified vehicle

333. *Affordable Hous. Found. v. Silva*, 469 F.3d 219, 241-42 (2d Cir. 2006) (citing *Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238, 256 (1948), and *Jones v. Rath Packing Co.*, 430 U.S. 519, 544 (1977) (Rehnquist, J., dissenting in part and concurring in part)).

334. *See N.Y. State Comm'n on Cable Television v. Fed. Comm'n Comm'n*, 669 F.2d 58, 62 (2d Cir. 1982) (courts “look to the effect, rather than the purpose of the state law”).

335. *Id.* (citing *Hines v. Davidowitz*, 312 U.S. 52, 67 (1941)).

336. *Geier v. Am. Honda Motor Co.*, 529 U.S. 861, 884-85 (2000).

337. *Id.* (quoting *Crosby v. Nat'l Foreign Trade Council*, 530 U.S. 363, 373 (2000)).

338. *See, e.g., Green Mountain Chrysler Plymouth Dodge Jeep v. Crombie*, 508 F. Supp. 2d 295, 301-02 (D. Vt. 2007).

339. *Virginia Uranium, Inc. v. Warren*, 139 S. Ct. 1894 (2019) (Gorsuch, J.) (plurality opinion); *see also supra* text accompanying notes 238-42.

340. *Id.*

market (and certainly not to unnecessarily perpetuate emissions).<sup>341</sup> The existence of CAA § 177, which allows states to adopt California's waiver-authorized standards instead of federal ones, further undercuts uniform-intent arguments. To base conflict preemption on a perceived uniformity rationale would commit doubly the sin that Justice Gorsuch warned of in *Virginia Uranium*<sup>342</sup>—it would require inferring the purpose of Congress (to create uniformity) and the purpose of the state (to destroy uniformity). After all, Congress less likely intended to create a 100% unified market than to allow states to experiment in ways that may incidentally improve air pollution.<sup>343</sup> As Justice Gorsuch wrote in *Virginia Uranium*,

[t]rying to discern what motivates legislators individually and collectively invites speculation and risks overlooking the reality that individual Members of Congress often pursue multiple and competing purposes, many of which are compromised to secure a law's passage and few of which are fully realized in the final product . . . . In disregarding these legislative compromises, we may only wind up displacing perfectly legitimate state laws on the strength of 'purposes' that only we can see, that may seem perfectly logical to us, but that lack the democratic provenance the Constitution demands before a federal law may be declared supreme.<sup>344</sup>

Second, the Clean Air Act is concerned with pollution controls on polluting vehicles, and is not intended to block laws advancing electric vehicles.<sup>345</sup> The Washington legislation is consistent with the broad purposes of the CAA, which, as noted, aims to reduce air pollution and explicitly contemplates state and local involvement in doing so.<sup>346</sup>

And finally, there is no frustration of purpose. Automakers have already stated an intent to build a wide range of electric cars in numerous vehicle categories,<sup>347</sup> and the technology to do so is widely available.<sup>348</sup> Compliance would neither be an

341. See *supra* Section II.B.1.

342. See *supra* Section III.A.

343. See *supra* Section II.B.1; see also *Wyeth v. Levine*, 555 U.S. 555, 574 (2009) (rejecting preemption in a prescription warning label tort case even though it meant different states would have different labeling requirements).

344. *Virginia Uranium*, 139 S. Ct. at 1907-08 (Gorsuch, J.) (plurality opinion); cf. *id.* at 1915 (Ginsburg, J., concurring) (rejecting "delicate balance" preemption argument because Congress had not regulated in the allegedly preempted area and thus had struck no balance at all).

345. See *supra* Section II.B.1.

346. See *supra* Section II.B.1.

347. E.g., Mark Matousek, *40 Electric Cars You'll See on the Road by 2025*, BUS. INSIDER (July 10, 2019), <https://www.businessinsider.com/electric-cars-that-will-be-available-by-2025-2018-1>; Zachary Shahan, *World's 10 Biggest Automakers & Their EV Plans*, CLEANTECHNICA (Oct. 29, 2018), <https://cleantechnica.com/2018/10/29/worlds-10-biggest-automakers-their-ev-plans/>.

348. Tesla, for instance, permits competitors to use its patents. See *supra* note 77 and accompanying text.

undue burden, nor would it result in impossible-to-meet, inconsistent vehicle standards.

Here, there is no clear conflict between the Washington bill and federal law. Automakers can make electric vehicles that comply with both state and federal laws. In fact, the Washington legislation does not require special modifications for Washington as it is expected that long before the legislation would go into effect, automakers will have multiple offerings of electric cars in all vehicle classes.<sup>349</sup> There is no evidence that the CAA intended to impose the absurd requirement that vehicles have at least *some* emissions. Accordingly, no sufficient preemptive conflict exists.

### 3. The Irrelevance of State Legislative Intent

In field and conflict preemption analysis, a court could use state legislative intent to favor preemption. That is, a court might perceive state legislative intent to stretch the scope of the state-regulated field, or might discern state legislative intent to infer a conflict or obstacle.

In the context of a vehicle electrification mandate, a challenger to the Washington legislation could maintain that the electrification requirement is simply an emissions or fuel-economy regulation in disguise—an impermissible strategy to control emissions and improve fuel economy<sup>350</sup> in furtherance of a state goal of reducing vehicle emissions.

Such a challenge would ask the court to scrutinize the motives behind the state legislation, since the text itself is devoid of any such intent. The outcome of a “motives” challenge is uncertain, but a court faithful to the increasing influence of conservative textualism and federalism should reject it.

When it comes to the scope of preemption, scrutinizing *Congress’s* intent by considering legislative history is sometimes a part of the analysis.<sup>351</sup> But Justice Thomas and others have critiqued the pervasive use of federal legislative history for peering into legislative motives in a preemption analysis.<sup>352</sup>

349. See, e.g., *GM Technology Paves the Way for an All-Electric Future*, GEN. MOTORS, <https://www.gm.com/our-stories/technology/gm-technology-paves-the-way-for-an-all-electric-future.html> (last visited Aug. 5, 2019); Paul A. Eisenstein & Ashley Turner, *Ford CEO Hackett Reassures Investors of EV Plans as It Pours Money into Electric F-150, ‘Mustang-Inspired’ Crossover*, CNBC (May 9, 2019), <https://www.cnbc.com/2019/05/09/ford-ceo-hackett-reassures-investors-as-it-pours-money-into-evs.html>.

350. Note that electric vehicles can be fuel-inefficient, and therefore mandating that all vehicles be electric would not necessarily have the effect of improving fuel economy. See *supra* note 266.

351. See *United States v. O’Brien*, 391 U.S. 367, 383-84 (1968) (“Inquiries into congressional motives or purposes are a hazardous matter. When the issue is simply the interpretation of legislation, the Court will look to statements by legislators for guidance as to the purpose of the legislature, because the benefit to sound decision-making in this circumstance is thought sufficient to risk the possibility of misreading Congress’ purpose.”) (footnote omitted); see also Meltzer, *supra* note 147, at 22-23 (noting examples of even Justices Scalia and Thomas using purposive approaches in the preemption context).

352. Meltzer, *supra* note 147, at 22-23.

Scrutinizing *state* legislative intent is another story. Federalism disfavors a federal court intruding on state power by looking into state legislative motives. In *Virginia Uranium*, Justice Gorsuch, writing for a plurality, warned against courts inquiring into state legislative motives when considering preemption challenges:

Consider just some of the costs to cooperative federalism and individual liberty we would invite by inquiring into state legislative purpose too precipitately. The natural tendency of regular federal judicial inquiries into state legislative intentions would be to stifle deliberation in state legislatures and encourage resort to secrecy and subterfuge. That would inhibit the sort of open and vigorous legislative debate that our Constitution recognizes as vital to testing ideas and improving laws . . . [F]ederal courts would risk subjecting similarly situated persons to radically different legal rules as judges uphold and strike down materially identical state regulations based only on the happenstance of judicial assessments of the “true” intentions lurking behind them.<sup>353</sup>

Justices Thomas and Kavanaugh joined in this portion of the opinion.<sup>354</sup> Despite the three concurring liberal justices’ reluctance to agree with this reasoning, it seems hard to square their agreement in the result with willingness to consider state legislative purpose. After all, it appeared entirely plausible that the Commonwealth of Virginia had sought to indirectly regulate what it could not directly.<sup>355</sup> (If state legislative purpose wasn’t informative then, when would it be?).<sup>356</sup> Alternatively, the justices might simply be willing to give states the benefit of the doubt when there are multiple plausible legislative purposes. Indeed, state legislative intent matters less under the Court’s evolving formalist and federalist preemption jurisprudence, as seen through *Virginia Uranium*.<sup>357</sup>

## CONCLUSION

State-based vehicle electrification mandates are a promising strategy for moving beyond gasoline-powered vehicles. There are solid legal arguments, rooted in precedent, that such legislation would not be preempted under the CAA or EPCA.

But precedent isn’t everything. Legal precedent is receiving less deference in recent years, especially at the Supreme Court.<sup>358</sup> Indeed, the Court has recently

353. *Virginia Uranium, Inc. v. Warren*, 139 S. Ct. 1894, 1906 (2019) (plurality opinion).

354. *Id.* at 1900.

355. *See supra* Section III.A.

356. *Accord Virginia Uranium*, 139 S. Ct. at 1919 (Roberts, C.J., dissenting) (“If such a statute does not ‘target’ or ‘seek to regulate’ a preempted field, what would? . . . [A] purpose inquiry is most useful precisely when the challenged state law does not purport to regulate a preempted field.”).

357. *See supra* Section III.A.

358. *See, e.g.*, Robert Barnes, *Supreme Court’s Conservatives Overturn Precedent as Liberals Ask ‘Which Cases the Court Will Overrule Next’*, WASH. POST (May 13, 2019),

overturned a number of longstanding precedents.<sup>359</sup> Nonetheless, despite the uncertainty of relying on precedent, states have a good case for avoiding preemption. The growing conservative textualist wing of the Court is skeptical of an expansive approach to preemption, as evidenced most recently in Justice Gorsuch's opinion in *Virginia Uranium v. Warren*. Nonetheless, because preemption is highly subjective there is a risk that vehicle electrification legislation might fail.

All told, it is worthwhile to pursue state-level vehicle electrification mandates, despite the legal uncertainty, for the following reasons:

- 1) The statutes may be upheld, in which case states will realize enormous benefits from vehicle electrification;
- 2) The introduction and passage of legislation paves the way for federal vehicle electrification legislation or rulemaking; and
- 3) State-level vehicle electrification mandates signal to automakers, governments, investors, and businesses that popular will for such mandates is building, thereby accelerating and promoting investment in EVs and EV battery technology and charging infrastructure for an electrified transportation system.

In sum, given serious questions regarding whether a vehicle electrification mandate is an emissions regulation, strong, non-emissions-related reasons for the proposed Washington legislation, and the unsettled, case-by-case nature of preemption analysis, there are multiple pathways by which a court could uphold the Washington bill consistent with existing precedent. Indeed, the environmentally friendly vehicle-electrification movement may find itself to be strange bedfellows with the Court's increasingly influential formalist and federalist conservative wing. Given the magnitude of the climate crisis, it is appropriate to move forward with state vehicle electrification legislation without excessive deference to ambiguous precedent from past decades.

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[https://www.washingtonpost.com/politics/courts\\_law/supreme-courts-conservatives-overturn-precedent-as-liberals-ask-which-cases-the-court-will-overrule-next/2019/05/13/b4d3c4f8-7595-11e9-bd25-c989555e7766\\_story.html](https://www.washingtonpost.com/politics/courts_law/supreme-courts-conservatives-overturn-precedent-as-liberals-ask-which-cases-the-court-will-overrule-next/2019/05/13/b4d3c4f8-7595-11e9-bd25-c989555e7766_story.html).

359. See, e.g., *id.* (discussing court's 5-4 overruling in *Franchise Tax Board v. Hyatt*, 139 S. Ct. 1485 (2019), of longstanding principle from *Nevada v. Hall*, 440 U.S. 410 (1979), regarding state-vs-state sovereign immunity); see generally BRANDON J. MURRILL, CONG. RESEARCH SERV., R45319, THE SUPREME COURT'S OVERRULING OF CONSTITUTIONAL PRECEDENT (2018), <https://fas.org/sgp/crs/misc/R45319.pdf> (reviewing stare decisis at the Court and cataloguing overrulings of precedent).