

A R T I C L E S

Pike Balancing: Vulnerabilities of State Greenhouse Gas Regulations and Possible Solutions

by Paul T. Stewart

Paul Stewart is a third-year J.D. student at Wayne State University Law School and is editor-in-chief of the *Wayne Law Review*. This Article won the 2013-2014 Beveridge & Diamond Constitutional Environmental Law Writing Competition.

Summary

The dormant Commerce Clause prohibits state-level regulations that improperly discriminate against out-of-state-interests or unduly burden interstate commerce. As such, this doctrine may present a barrier to state-level greenhouse gas regulations that affect out-of-state energy and other greenhouse gas sources. But there are ways around this doctrine for states that are careful in how they construct their programs. By arguing that a state-level GHG regulation could impact a much larger portion of global GHG emissions than merely its own state's contribution, and by arguing in the alternative that the dormant Commerce Clause analysis should not even be applied to a state-level GHG regulation in the first place, states can maximize the chances of their nondiscriminatory GHG regulations surviving dormant Commerce Clause challenges.

I. Introduction

In recent years, numerous states have taken actions to reduce emissions of greenhouse gases (GHGs) associated with climate change, and some have passed GHG regulations.¹ Any state-level regulation that burdens interstate commerce is susceptible to challenges under the dormant Commerce Clause doctrine, which generally prohibits state-level regulations that either: (1) improperly discriminate against out-of-state-interests in favor of in-state interests; or (2) burden interstate commerce to an extent not justified by the in-state benefits sought by the regulation (as determined through so-called *Pike* balancing).² Considering whether the burden on interstate commerce by a state-level GHG regulation is justified by the in-state benefits sought by the regulation involves unsettled questions about the capability of any particular state to alter global GHG emission levels enough to experience noticeable local benefits in the form of reduced climate change impacts.³

The case law considering the in-state benefits associated with state-level regulations under dormant Commerce Clause challenges is in the nascent stages, although both courts and commentators have suggested that the 2007 U.S. Supreme Court case of *Massachusetts v. EPA*⁴ supports the notion that a state can show concrete in-state benefits associated with its state-level GHG regulation despite the challenges of showing that a state could alter global GHG emission levels in any meaningful way.⁵

This Article argues that *Massachusetts* definitively does not support a state's showing of concrete in-state benefits associated with its state-level GHG regulation (Part III.B.). The Article also asserts that there are challenges with a state showing such in-state benefits without the assistance of *Massachusetts* (Part III.A.). But these challenges are not necessarily insurmountable. The Article presents arguments that can be utilized to help overcome the challenges of the in-state benefit issue without any departure from Supreme Court precedent (Part III.C.).

Before addressing the arguments, however, the Article first provides background on the history of the dormant Commerce Clause (Part II.A.), the current state of the law for *Pike* balancing (Parts II.B. & II.C.), a recent case

Author's Note: The author would like to thank Profs. Noah Hall and Jonathan Weinberg for their insights on this Article topic and for their outstanding teaching in the classroom.

1. See Center for Climate and Energy Solutions, *State Legislation From Around the Country*, <http://www.c2es.org/us-states-regions/key-legislation> (last visited Jan. 12, 2013).
2. See *infra* Part II.A.
3. See *infra* Part II.F.
4. 549 U.S. 497, 37 ELR 20075 (2007).
5. See *infra* notes 103-04.

that has directly raised the question of *Pike* balancing in the context of a state-level GHG regulation (Part II.D.), standing cases involving climate impacts from GHG emissions and their potential intractability for the application of *Pike* balancing to state-level GHG regulations (Part II.E.), and GHG emission levels in the United States (Part II.F.).

Whether it is desirable from a policy standpoint, or appropriate from a constitutional interpretation standpoint, to strike down a particular state-level GHG regulation due to its violation of the dormant Commerce Clause are interesting questions that are not addressed here. Instead, the primary goals of this Article are to: (1) accurately portray the current state of the law surrounding the application of *Pike* balancing to a state-level GHG regulation; and (2) assess the viability of various arguments for and against a state-level GHG regulation surviving *Pike* balancing, given the current state of the law.

II. Background

A. The Dormant Commerce Clause and Pike Balancing

The Commerce Clause of the U.S. Constitution states that the U.S. Congress has the power to “regulate Commerce with foreign Nations, and among the several states, and with Indian Tribes.”⁶ Although on its face the Commerce Clause is an enumerated power to Congress, the Supreme Court has long interpreted the Commerce Clause to implicitly restrict state regulatory authority that unjustifiably “discriminate[s] against or burden[s] the interstate flow of articles of commerce,” even when a federal statute does not conflict with the state regulation.⁷ This restriction is commonly referred to as the “dormant” or “negative” Commerce Clause.⁸ The Court has looked to the history of the Commerce Clause in support of the restriction, noting that the Clause

reflected a central concern of the Framers that was an immediate reason for calling the Constitutional Convention: the conviction that in order to succeed, the new Union would have to avoid the tendencies toward economic Balkanization that had plagued relations among

the Colonies and later among the States under the Articles of Confederation.⁹

Through the Supremacy Clause of the Constitution¹⁰ (in combination with the Commerce Clause), Congress can preempt state regulations that affect interstate commerce.¹¹ Therefore, the resilience of the dormant Commerce Clause doctrine likely reflects a continuing belief that Congress’ capability to preempt state laws by itself is insufficient for realizing the goals that the Framers sought through the Commerce Clause.

The modern application of the dormant Commerce Clause involves two steps.¹² The first step is to determine whether the state regulation in question “regulates evenhandedly with only ‘incidental’ effects on interstate commerce.”¹³ If the local regulation is discriminatory, meaning it favors in-state economic interests at the expense of out-of-state economic interests, then it is “virtually *per se* invalid” without further inquiry needed.¹⁴ If the local regulation is not discriminatory and is purported to serve a legitimate local purpose, but it nevertheless poses incidental burdens to interstate commerce, then the law is valid unless “the burden imposed on such commerce is clearly excessive in relation to the putative local benefits.”¹⁵ This second step of weighing burdens on interstate commerce with putative local benefits (once a regulation is deemed to be nondiscriminatory and serving a legitimate local purpose) is commonly referred to as the “*Pike* balancing” test. Its name refers to the 1970 Supreme Court case of *Pike v. Bruce Church*,¹⁶ where the weighing process was originally articulated.

Pike involved an Arizona statute that required cantaloupes grown in Arizona and sold into the commercial mar-

6. U.S. CONST. art. I, §8, cl. 3.

7. *Oregon Waste Sys., Inc. v. Dep’t of Env’tl. Quality*, 511 U.S. 93, 96, 24 ELR 20674 (1994). See generally *Cooley v. Bd. of Wardens of Port of Philadelphia ex rel. Soc’y for Relief of Distressed Pilots*, 53 U.S. 299 (1852); *In re State Freight Tax*, 82 U.S. 232 (1873) (two early Supreme Court cases on the restrictive aspect of the Commerce Clause). See generally *United Haulers Ass’n, Inc. v. Oneida-Herkimer Solid Waste Mgmt. Auth.*, 550 U.S. 330, 37 ELR 20097 (2007) (a modern Supreme Court case on the dormant Commerce Clause).

8. See *General Motors Corp. v. Tracy*, 519 U.S. 278, 300 (1997).

9. *Hughes v. Oklahoma*, 441 U.S. 322, 325, 9 ELR 20360 (1979).

10. U.S. CONST. art. VII, cl. 2.

11. See generally *Gade v. National Solid Wastes Mgmt. Ass’n*, 505 U.S. 88, 98, 108, 22 ELR 21073 (1992) (an example of the Supreme Court’s application of the Supremacy Clause).

12. See *Oregon Waste Sys., Inc.*, 511 U.S. at 99.

13. *Id.* (quoting *Hughes*, 441 U.S. at 336).

14. *Oregon Waste Sys., Inc.*, 511 U.S. at 99. There is also a *per se* prohibition on a state regulation that is extraterritorial in nature, although the Court has narrowed this prohibition in recent years. See Brannon P. Denning, *Extraterritoriality and the Dormant Commerce Clause: A Doctrinal Post-Mortem*, 73 LA. L. REV. 979 (2013). A notable exception to the *per se* invalidity of discriminatory regulations is when a local law serves “a legitimate local purpose, and the purpose [is] one that cannot be served as well by available nondiscriminatory means.” *Maine v. Taylor*, 477 U.S. 131, 140 (1986). In *Taylor*, the Court upheld a regulation by the state of Maine that prohibited the importation of live baitfish into the state. *Id.* at 131. The claimed purpose of the prohibition was to protect the state’s waters from ecological harm that could result from parasites and non-native species, and the state claimed that there was not an alternative viable method for preventing parasites and non-native species from being imported with live baitfish. *Id.* at 133.

15. *Oregon Waste Sys., Inc.*, 511 U.S. at 99 (quoting *Pike v. Bruce Church, Inc.*, 397 U.S. 137, 142 (1970)).

16. 397 U.S. 137 (1970).

ketplace to “be packed in regular compact arrangement in closed standard containers approved by the supervisor.”¹⁷ When a cantaloupe grower based in Arizona was issued an order from the state that prohibited the grower from shipping its cantaloupes to California for processing and packing, the grower challenged the order as an unconstitutional burden on interstate commerce.¹⁸ The Court expressed skepticism about the legitimacy of the interest that Arizona claimed to be furthering, which involved protecting and enhancing the reputation of Arizona cantaloupes in the marketplace.¹⁹ But the Court concluded that even if the local purpose claimed by Arizona was assumed to be legitimate, “the State’s tenuous interest in having the company’s cantaloupes identified as originating in Arizona cannot constitutionally justify the requirement that the company build and operate an unneeded \$200,000 packing plant in the State [in 1968 dollars].”²⁰

The dormant Commerce Clause doctrine, including the *Pike* balancing test, has long been criticized by a variety of scholars and has been a consistent area of contention among Justices on the Supreme Court.²¹ Much of the critique surrounding *Pike* balancing can broadly be categorized as follows: (1) whether judges have the capacity to conduct *Pike* balancing effectively; (2) whether such balancing is an appropriate role for a judge given that such balancing of interests and burdens has historically been a function of legislatures; and (3) whether the balancing process makes it too easy for judges to appear objective while in actuality deciding issues based on subjective value judgments.²² One of the challenges of applying *Pike* balancing that likely contributes to all three categories of critique is that most balancing situations involve comparing (1) at least some nonmarket local benefits that are difficult to value objectively, with (2) economic burdens on interstate commerce that—while perhaps easier to value objectively—are different in nature from the nonmarket local benefits.

Opposition to *Pike* balancing on the Court has been led by Justices Antonin Scalia and Clarence Thomas. Justice Scalia has stated that assessing the burdens and benefits of a law under *Pike* balancing necessarily involves “assigning a policy-based weight to each of them. It is a matter not of weighing apples against apples, but of deciding whether three apples are better than six tangerines.”²³ Justice Thomas has not reserved his dormant Commerce Clause

hostility for only *Pike* balancing, but rather has repudiated the entire doctrine, stating that “application of the negative Commerce Clause turns solely on policy considerations, not on the Constitution. Because this Court has no policy role in regulating interstate commerce, I would discard the Court’s negative Commerce Clause jurisprudence.”²⁴ While Justice Thomas’ view that the Court’s dormant Commerce Clause jurisprudence should be discarded in its entirety has not been embraced by other Justices on the Court, the Court’s 2008 decision in *Department of Revenue of Kentucky v. Davis*²⁵ shows that Justice Scalia’s skepticism of *Pike* balancing appears to be gaining traction with other Justices, at least for certain factual scenarios.

B. *Davis*: Is Application of Pike Balancing an Open Question?

In *Davis*, taxpayers in Kentucky sought a declaratory judgment that Kentucky’s income tax scheme was unconstitutional under the dormant Commerce Clause.²⁶ The state income tax scheme did not apply income tax to interest on bonds issued by Kentucky or its subdivisions, but did apply income tax to interest on bonds issued outside of Kentucky.²⁷ The Court held that Kentucky’s income tax scheme was not impermissibly discriminatory under step one of dormant Commerce Clause analysis based on reasons related to Kentucky’s status as a public entity that are outside the scope of this Article.²⁸ More important here was the Court’s conclusion that *Pike* balancing was not appropriate because “the current record and scholarly material convince us that the Judicial Branch is not institutionally suited to draw reliable conclusions of the kind that would be necessary for the Davises to satisfy a *Pike* burden in this particular case.”²⁹ The Court listed some of the theoretical costs and benefits in the *Davis* case, emphasizing the complexity and uncertainty of discerning the tax scheme’s impacts on bond market activity and associated investment flows both within and outside of Kentucky.³⁰ The Court then stated that:

What is most significant about these cost-benefit questions is not even the difficulty of answering them or the inevitable uncertainty of the predictions that might be made in trying to come up with answers, but the unsuitability of the judicial process and judicial forums for making whatever predictions and reaching whatever answers are possible at all.³¹

In *Davis*, the Court entered new territory in its dormant Commerce Clause jurisprudence by finding that *Pike* bal-

17. *Id.* at 138 (quoting ARIZ. REV. STAT. ANN. §3-503 (1969)).

18. *Pike*, 397 U.S. at 138.

19. *Id.* at 144-45.

20. *Id.* at 145. According to the Consumer Price Index inflation calculator from the Bureau of Labor Statistics, \$200,000 in 1968 dollars (when the order was issued) would have the same buying power as \$1,345,683.91 in 2013 dollars. Bureau of Labor Statistics, *CPI Inflation Calculator*, http://www.bls.gov/data/inflation_calculator.htm (last visited Nov. 1, 2013).

21. See Brannon P. Denning, *Reconstructing the Dormant Commerce Clause*, 50 WM. & MARY L. REV. 417 (2008).

22. See *id.* at 453-56, for a presentation of these and other critiques of *Pike* balancing from both judges and scholars.

23. Dep’t of Revenue of Ky. v. Davis, 553 U.S. 328, 360 (2008); see also Bendix Autolite Corp. v. Midwesco Enter., Inc. 486 U.S. 888 (1988) (presenting an earlier critique of *Pike* balancing from Justice Scalia that utilizes similar reasoning).

24. United Haulers Ass’n, Inc. v. Oneida-Herkimer Solid Waste Mgmt. Auth., 550 U.S. 330, 349, 37 ELR 20097 (2007).

25. 553 U.S. 328 (2008).

26. *Id.* at 336-37.

27. *Id.* at 332-33.

28. *Id.* at 341-53.

29. *Id.* at 353.

30. *Id.* at 353-55.

31. *Id.* at 355.

ancing was not appropriate for a particular case due to the inability of the Judicial Branch to make reliable enough determinations about the alleged costs imposed on interstate commerce and the putative local benefits.³²

The Court's position on *Pike* balancing from *Davis* invites a variety of interpretations about where the Court currently stands on *Pike* balancing generally.³³ The types of valuation difficulties of the *Pike* balancing process that were discussed in *Davis* are frequently encountered during *Pike* balancing, which might lead one to infer that the *Pike* balancing discussion in *Davis* is far-reaching. But despite the sweeping nature of some language in the *Pike* balancing section of *Davis*, the Court never explicitly stated that it intended to reverse any *Pike* balancing precedent. In addition, the Court acknowledged that *Pike* balancing is "generally" available to plaintiffs who fail to show the state law to be discriminatory under step one, even though the Court did not think it was appropriate for the facts in *Davis*.³⁴ What can be reasonably discerned from the Court in *Davis* is that there is a threshold level where the complexity and uncertainty associated with a *Pike* balancing process makes it inappropriate for the weighing to be undertaken at all—which in effect upholds the state regulation without subjecting it to *Pike* balancing.

C. *Pike Balancing and the Characterization of Costs and Benefits*

Approximately one year prior to *Davis*, the Supreme Court decided another dormant Commerce Clause case, *United Haulers Association, Inc. v. Oneida-Herkimer Solid Waste Management Authority*.³⁵ In *United Haulers*, waste management companies claimed that a "flow control" ordinance requiring waste transport companies to deliver waste collected within a group of counties to specific processing facilities owned by the public was a violation of the dormant Commerce Clause.³⁶ A majority of the Court held that the ordinance was not impermissibly discriminatory, and then a plurality continued to step two of the analysis by conducting *Pike* balancing.³⁷ The plurality explained that after extensive discovery the district court did not find any disparate impact between out-of-state businesses and in-state businesses, and the circuit court only alluded to "a

rather abstract harm" to interstate commerce.³⁸ The plurality then did a brief assessment of the putative local benefits, which they found to include: (1) "a convenient way [for the counties] to finance their integrated package of waste disposal services;" and (2) increased recycling that confers "significant health and environmental benefits upon the citizens of the Counties."³⁹ The plurality did not describe these benefits any further. They simply pointed to the existence of the benefits and then concluded that the ordinance survived *Pike* balancing because "any arguable burden the ordinances impose on interstate commerce does not exceed their public benefits."⁴⁰

A sampling of other *Pike* balancing exercises undertaken by the federal courts to both uphold and invalidate local regulations reveal a similar lack of precision in characterizing costs and benefits.⁴¹ Laws and regulations generally appear to be upheld or invalidated through *Pike* balancing not by a technical process of comparing quantitative costs and benefits, but by the courts either: (1) finding at least the potential existence of concrete putative local benefits without readily apparent burdens on interstate commerce that are "clearly excessive"⁴² (in which case the laws or regulations are upheld)⁴³; or (2) finding readily apparent burdens on interstate commerce without potential local benefits that could even come close to providing a justification (in which case they are invalidated).⁴⁴ In addition, by not requiring a rigorous and detailed showing of concrete putative local benefits while at the same time requiring a showing of significant burdens on interstate commerce that must be "clearly excessive"⁴⁵ to the putative local benefits, *Pike* balancing tends to be deferential toward local regulations.⁴⁶

32. *Id.* at 353-55.

33. See Norman R. Williams & Brannon P. Denning, 85 NOTRE DAME L. REV. 247, 306-09 (2009) (discussing four possible interpretations).

34. *Davis*, 553 U.S. at 353. Justice Anthony Kennedy's dissenting opinion in *Davis* (joined by Justice Samuel Alito) rebuked the majority's refusal to analyze whether the Kentucky tax scheme unduly burdened interstate commerce. See *id.* at 364-65 (Kennedy, J., dissenting).

35. 550 U.S. 330, 37 ELR 20097 (2007).

36. *Id.* at 330.

37. See *id.* at 346. Justices Scalia and Thomas agreed that the ordinance was not impermissibly discriminatory, but did not sign onto the *Pike* balancing portion of Chief Justice John Roberts' opinion. See *id.* at 348. Justices Alito, John Paul Stevens, and Kennedy dissented entirely from Justice Roberts' opinion, arguing that the ordinance was impermissibly discriminatory (without mentioning the *Pike* balancing portion of the opinion). See *id.* at 355-71.

38. *United Haulers*, 550 U.S. at 346.

39. *Id.*

40. *Id.*

41. For examples, see *Northwest Cent. Pipeline Corp. v. State Corp. Comm'n of Kan.*, 489 U.S. 493, 525 (1989) (upholding a local regulation that penalized delays in in-state natural gas production); *Yamaha Motor Corp., U.S.A. v. Jim's Motorcycle, Inc.*, 401 F.3d 560, 569-74 (4th Cir. 2005) (invalidating a Virginia law that limited the ability of motorcycle manufacturers to open new dealerships in the state); *Union Pac. R.R. Co. v. California Pub. Util. Comm'n*, 346 F.3d 851, 870-72 (9th Cir. 2003) (invalidating a California regulation that implemented performance standards for railroad companies).

42. *Pike v. Bruce Church, Inc.*, 397 U.S. 137, 142 (1970).

43. See, e.g., *United Haulers*, 550 U.S. at 346-47; *Northwest Cent. Pipeline Corp.*, 489 U.S. at 525.

44. See, e.g., *Yamaha Motor Corp., U.S.A.*, 401 F.3d at 569-74; *Union Pac. R.R. Co.*, 346 F.3d at 870-72.

45. *Pike*, 397 U.S. at 142.

46. Much academic literature supports the assertion that *Pike* balancing is deferential toward local regulations. For examples, see Denning, *Reconstructing the Dormant Commerce Clause*, *supra* note 21, at 500; Kirsten H. Engel, *The Dormant Commerce Clause Threat to Market-Based Environmental Regulation: The Case of Electricity Deregulation*, 26 ECOLOGY L.Q. 243, 289 (1999); Garrick B. Pursley, *Dormancy*, 100 GEO. L.J. 497, 541 (2012); John M. Baker & Mehmet K. Konar-Steenberg, "Drawn From Local Knowledge . . . and Conformed to Local Wants": *Zoning and Incremental Reform of Dormant Commerce Clause Doctrine*, 38 LOY. U. CHI. L.J. 1, 5 (2006); Brannon P. Denning, *Dormant Commerce Clause Limits on the Regulation of Big Boxes and Chain Stores: An Update*, 58 CASE W. RES. L. REV. 1233, 1236 (2008).

D. Pike Balancing for State-Level GHG Regulations: Rocky Mountain Farmers Union v. Corey

In June 2014 the Supreme Court denied a petition for certiorari and let stand the U.S. Court of Appeals for the Ninth Circuit's decision in *Rocky Mountain Farmers Union v. Corey*.⁴⁷ The case involved a dormant Commerce Clause challenge to California's Low Carbon Fuel Standard (LCFS). In an effort to reduce GHG emissions, the fuel standard set an upper limit on the average carbon intensity of transportation fuels consumed in California.⁴⁸ Since GHG emissions have the same impact on the climate regardless of where they are emitted, the LCFS utilized life-cycle analysis to measure the amount of GHG emissions associated with fuels consumed in California not just from combustion within California, but also from the development and transportation of the fuels (both within and outside California).⁴⁹ For example, for ethanol fuel produced from corn in the Midwest, the standard considered not just the emissions from combustion of the fuel within California, but also the GHG emissions released during transportation of the fuel from the Midwest to California and the GHG emissions that occurred while converting the corn to ethanol in the Midwest (including the emissions from electricity and heat used for the conversion).⁵⁰

A number of parties sued California claiming that the LCFS violated the dormant Commerce Clause (and also that the LCFS was preempted by the federal Clean Air Act (CAA)).⁵¹ The Ninth Circuit held that the crude oil provisions of the LCFS were not impermissibly discriminatory, and also that the ethanol provisions were not facially discriminatory, although they could be discriminatory in purpose or practical effect.⁵² The court determined, however, that both the crude oil and ethanol provisions did have incidental effects on interstate commerce, so the case was remanded to the district court with directions to conduct *Pike* balancing on the crude oil provisions as well as on the ethanol provisions if the ethanol provisions were not found to be discriminatory in purpose or practical effect.⁵³ As of this writing, the district court has not yet issued a decision on remand.

A key question on remand is whether the state of California can show discernible local benefits under *Pike* balancing. This question is dependent on whether the decrease in global GHG emissions that could result from the LCFS could potentially equate to local benefits for the state of California that are discernible by a court. Any local benefits would presumably be in the form of decreased negative climate change impacts in the future within California's

territory. The connection between local climate benefits and regulatory initiatives to reduce GHG emissions was explored by the Supreme Court in *Massachusetts v. EPA*.⁵⁴

E. Massachusetts v. EPA Standing Analysis and Washington Environmental Council v. Bellon

In *Massachusetts v. EPA*, a group of private organizations petitioned EPA to regulate GHG emissions from new motor vehicles under the CAA.⁵⁵ After EPA denied the petition, Massachusetts (and other state and local governments) challenged EPA's denial, which led to a decision by the Supreme Court.⁵⁶ The first question the Court decided was whether Massachusetts had standing to challenge EPA's denial of the petition.⁵⁷ The Court found that because Massachusetts was attempting to protect "quasi-sovereign interests," and because Congress had provided it with a procedural right to challenge EPA's denial of the rulemaking petition, Massachusetts had "special solicitude" for purposes of the Court's standing analysis.⁵⁸ The Court then proceeded to a conventional injury, causation, and redressability standing analysis where "a litigant must demonstrate that it has suffered a concrete and particularized injury that is either actual or imminent, that the injury is fairly traceable to the defendant, and that it is likely that a favorable decision will redress that injury."⁵⁹

The Court held that based on the injury, causation, and redressability standing analysis, and after taking into account Massachusetts' special solicitude, Massachusetts had standing to challenge denial of the petition.⁶⁰ Relevant here, the Court rejected EPA's arguments that Massachusetts could not show causation because the GHG emissions from motor vehicles being targeted by the petition were too insignificant relative to global GHG emissions.⁶¹ The Court explained that for complex problems like climate change, regulatory agencies do not typically attempt to address the problem in a single action, but rather take an incremental approach to the problem over time.⁶² Therefore, the Court indicated that it was inappropriate to look at addressing GHG emissions from motor vehicles in isolation; instead, addressing GHG emissions from motor vehicles should be considered as the first step of a potentially more comprehensive regulatory approach.⁶³

The Court also disagreed with the assertion that the transportation-based GHG emissions in question (cited by the Court as 6% of global GHG emissions)⁶⁴ were insignificant, stating that "[j]udged by any standard, U.S.

47. 730 F.3d 1070, 43 ELR 20216 (9th Cir. 2013), cert. denied, Nos. 13-1148 et al. (U.S. June 30, 2014).

48. *Id.* at 1080.

49. *Id.* at 1081.

50. *See id.*

51. *Rocky Mountain Farmers Union*, 730 F.3d at 1077; Clean Air Act (CAA), 42 U.S.C. §§7401-7671q, ELR STAT. CAA §§101-618.

52. *Rocky Mountain Farmers Union*, 730 F.3d at 1078.

53. *Id.*

54. *Massachusetts*, 549 U.S. 497.

55. *Id.* at 510.

56. *Id.* at 497.

57. *Id.* at 516-26.

58. *Id.* at 518-20.

59. *Id.* at 517 (quoting *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560-61, 22 ELR 20913 (1992)).

60. *Id.* at 516-26.

61. *Id.* at 523-25.

62. *Id.* at 524.

63. *Id.*

64. *Id.*

motor-vehicle emissions make a meaningful contribution to greenhouse gas concentrations and hence, according to petitioners, to global warming.⁶⁵

The standing analysis from *Massachusetts v. EPA* was recently considered by the Ninth Circuit in *Washington Environmental Council v. Bellon*.⁶⁶ In that case, environmental advocacy organizations alleged that state and regional agencies violated the CAA by failing to issue technology standards that would limit GHG emissions from five oil refineries in the state of Washington.⁶⁷ The court held that the environmental organizations failed to satisfy the causation and redressability requirements for constitutional standing, so the case was dismissed for lack of subject matter jurisdiction.⁶⁸ Specifically, the Ninth Circuit found the causal link between the failure of the agencies to set GHG-limiting technology standards at the refineries and the alleged injuries of the plaintiffs to be too tenuous to support standing.⁶⁹ The court stated that the causal chain presented by the plaintiffs “consists of a series of links strung together by conclusory, generalized statements of ‘contribution,’ without any plausible scientific or other evidentiary basis that the refineries’ emissions are the source of their injuries.”⁷⁰ The court also noted that there was a “natural disjunction between the [p]laintiff’s localized injuries and the greenhouse effect” that makes establishing the requisite causal chain a “particularly challenging task.”⁷¹ The court cited the U.S. Geological Survey, which stated that “[i]t is currently beyond the scope of existing science to identify a specific source of CO₂ emissions and designate it as the cause of specific climate impacts at an exact location.”⁷²

The plaintiffs in *Washington Environmental Council* unsuccessfully argued that the standing analysis from *Massachusetts v. EPA* supported their showing of standing.⁷³ As discussed above, the Supreme Court in *Massachusetts* held that Massachusetts did have standing to challenge EPA’s denial of a petition for EPA to regulate GHG emissions from new motor vehicles.⁷⁴ One might think that the same general challenges in establishing the causal chain cited in *Washington Environmental Council* were present in *Massachusetts v. EPA* (the causal chain in *Massachusetts* going from EPA regulation of GHG emissions from new motor vehicles to detrimental climate impacts experienced by Massachusetts⁷⁵), which might mean that the causal chain challenges in *Washington Environmental Council* discussed above should not doom the plaintiffs’ standing.

However, the Ninth Circuit in *Washington Environmental Council* distinguished *Massachusetts v. EPA* based on two factors: (1) special solicitude; and (2) evidence showing that the GHG emissions in question constituted a “meaningful contribution” to global GHG concentrations.⁷⁶ The court stated that as private organizations not seeking a procedural right, the plaintiffs were not entitled to the “relaxed” standing requirements that Massachusetts was entitled to under special solicitude.⁷⁷ The court then concluded that even if plaintiffs did receive the same special solicitude that Massachusetts received, *Massachusetts* still did not dictate standing for the plaintiffs because the plaintiffs did not provide evidence that GHG emissions from the refineries in Washington constituted a “meaningful contribution” to global GHG emissions.⁷⁸ In *Massachusetts*, the Court deemed GHG emissions from the U.S. transportation sector—at 6% of global emissions—to be a “meaningful contribution” to global GHG concentrations for purposes of the causation prong of the standing analysis.⁷⁹ In *Washington Environmental Council*, the emissions from the refineries constituted only 5.9% of the GHG emissions within Washington.⁸⁰ The court in *Washington Environmental Council* stopped just short of saying that the amount of GHG emissions from the refineries was definitively not a “meaningful contribution” to global GHG concentrations. Instead, the court said that the plaintiffs failed to “provide any evidence that places this statistic [5.9% of GHG emissions in Washington State] in national or global perspective to assess whether the refineries’ emissions are a ‘meaningful contribution’ to global GHG levels.”⁸¹

F. Climate Change Impacts, Potential Societal Responses, and Relative GHG Emission Levels

In order to analyze the application of *Pike* balancing to a state-level GHG regulation like California’s LCFS, it is important to review some of the basics of the connection between GHG emissions and climate change impacts that are experienced locally.

According to the Intergovernmental Panel on Climate Change (IPCC), the increase in atmospheric concentrations of GHGs since the industrial revolution has already caused and will continue to cause changes to the earth’s climate.⁸² The biggest driver of this atmospheric GHG increase has been emissions of carbon dioxide (CO₂) from the combustion of fossil fuels such as coal, oil, and natural gas.⁸³ Scientists have already observed negative impacts

65. *Id.* at 525.

66. 732 F.3d 1131, 1144-46, 43 ELR 20231 (9th Cir. 2013).

67. *Id.* at 1135.

68. *Id.* at 1147.

69. *Id.* at 1144.

70. *Id.* at 1142.

71. *Id.* at 1143.

72. *Id.* (quoting Memorandum from the Director of the U.S. Geological Survey to the Director of the Fish and Wildlife Service (May 14, 2008), available at http://www.fws.gov/home/feature/2008/polarbear012308/pdf/Memo_to_FWS-Polar_Bears.PDF).

73. *Id.* at 1144.

74. *Massachusetts*, 549 U.S. at 516-26.

75. *Id.*

76. *Washington Envtl. Council*, 732 F.3d at 1144-46.

77. *Id.* at 1144-45.

78. *Id.* at 1145-46.

79. *Massachusetts*, 549 U.S. at 524-25.

80. *Washington Envtl. Council*, 732 F.3d at 1143.

81. *Id.* at 1146.

82. IPCC, *Summary for Policymakers* 9-11, in CLIMATE CHANGE 2013: THE PHYSICAL SCIENCE BASIS. CONTRIBUTION OF WORKING GROUP I TO THE FIFTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (T.F. Stocker et al. eds., 2013).

83. GLOBAL CLIMATE CHANGE IMPACTS IN THE UNITED STATES 9 (Thomas R. Karl et al. eds., 2009).

from climate change in the United States and expect such impacts to increase.⁸⁴ Examples of projected negative impacts in the United States include increases in water shortages, increases in challenges to agricultural production, and increases in sea-level rises and storm surges that damage coastal areas.⁸⁵ Region-level projected impacts are available through the U.S. Global Change Research Program's Second National Assessment published in 2009.⁸⁶ Impact projections at the state level are typically conducted by public entities within the state, and there is considerable variation in the extent to which state-level projections are available, if at all.⁸⁷ California is an example of a state that has conducted significant research on climate change impacts within its borders.⁸⁸

Societal responses to climate change can be broadly categorized as either mitigation measures or adaptation measures.⁸⁹ Mitigation measures involve reducing the human contribution to climate change, with the primary mitigation measure being the reduction of GHG emissions.⁹⁰ Adaptation measures involve minimizing harms and enhancing benefits that result from climate change.⁹¹ An example of an adaptation measure is building a levee to protect a coastal community from rising sea levels caused by climate change.⁹²

An important aspect of climate change for purposes of the discussion here is that due to the mixing of GHG emissions in the atmosphere, GHG emissions have the same impact on the climate regardless of where they are emitted.⁹³ This means that climate impacts experienced locally are the result of GHG emissions that have occurred throughout the world.⁹⁴ While the amount of GHG emissions among countries varies considerably, there is no single country that accounts for more than approximately 21% of global GHG emissions (China accounts for an estimated 21%, followed by the United States at 14% and Russia at 5%).⁹⁵ In terms of the contribution of states within the

United States to global GHG emissions, no state accounts for more than approximately 1.9% of global GHG emissions (Texas accounts for an estimated 1.9%, followed by California at 1% and Ohio at 0.7%).⁹⁶ About 14 states are each responsible for less than 0.1% of global emissions.⁹⁷

III. Analysis

A. Potential Hurdles With Showing Putative Local Benefits for State-Level GHG Regulations

As discussed above in Part II.D., in *Rocky Mountain Farmers Union*, the Ninth Circuit remanded to the district court to conduct *Pike* balancing on California's LCFS, which aimed to minimize GHG emissions resulting from transportation fuels combusted in the state.⁹⁸ Under *Pike* balancing, the court will compare the burdens on interstate commerce resulting from the LCFS with the putative local benefits associated with the LCFS, the putative local benefits presumably being a decrease in detrimental climate impacts.⁹⁹ Estimating the precise amount of climate change impacts resulting from any specified amount of GHG emissions is an extremely complex and uncertain undertaking.¹⁰⁰ But at least some commentators have felt comfortable dismissing the notion that any state's GHG emissions could influence global emissions enough for in-state emission reductions to even theoretically result in noticeable changes in local climate impacts.¹⁰¹ This is supported by reviewing the data

84. *Id.* at 12.

85. *See id.*

86. GLOBAL CLIMATE CHANGE IMPACTS, *supra* note 83, at 9.

87. *See* Terri L. Cruce, Pew Center on Global Climate Change, *Adaptation Planning: What U.S. States and Localities Are Doing* (Aug. 2009), <http://www.c2es.org/docUploads/state-adaptation-planning-august-2009.pdf>.

88. *See* State of California, Climate Change Portal, *Climate Change Science*, <http://www.climatechange.ca.gov/research/index.html> (last visited Jan. 12, 2014).

89. GLOBAL CLIMATE CHANGE IMPACTS, *supra* note 83, at 9.

90. *Id.*

91. *Id.*

92. IPCC, CLIMATE CHANGE 2007: IMPACTS, ADAPTATION AND VULNERABILITY. CONTRIBUTION OF WORKING GROUP II TO THE FOURTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 340-44 (M.L. Parry et al. eds., 2007).

93. *See* IPCC, CLIMATE CHANGE 2007: THE PHYSICAL SCIENCE BASIS. CONTRIBUTION OF WORKING GROUP I TO THE FOURTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 24 (S. Solomon et al. eds., 2007); *see also* U.S. EPA, *Climate Change Indicators in the United States: Greenhouse Gases*, <http://www.epa.gov/climate/climatechange/science/indicators/ghg/index.html> (last visited Jan. 12, 2014).

94. Kirsten H. Engel & Barak Y. Orbach, *Micro-Motives and State and Local Climate Change Initiatives*, 2 HARV. L. & POL'Y REV. 119, 120 (2008).

95. World Resources Institute, *Climate Analysis Indicators Tool 2.0*, <http://cait2.wri.org/> (last visited Jan. 12, 2014). Based on 2010 data; includes emissions from the land-use change and forestry sector (LUCF).

96. *Id.* Based on 2010 data; includes emissions from LUCF. The total U.S. emissions listed in the state-level dataset did not match exactly the total U.S. emissions listed in the country-level dataset. Therefore, each state's percent of total U.S. emissions as listed in the state-level dataset was multiplied by the U.S. total in the country-level dataset, and then the resulting value for each state was divided by global GHG emissions as provided in the country-level data set, resulting in an approximate percent of global emissions for each state.

97. *Id.* Based on 2010 data; includes emissions from LUCF. For 2010, Vermont actually had a very small *negative* emissions value (-0.09 MtCO₂e) because it is estimated that the amount of GHGs removed from the atmosphere in Vermont through GHG-absorbing land use and forestry changes was greater than the amount of GHG emissions that occurred within the state. All other states had positive emission values.

98. *Rocky Mountain Farmers Union*, 730 F.3d 1070.

99. *Oregon Waste Sys., Inc. v. Dep't of Envtl. Quality of State of Or.*, 511 U.S. 93, 99, 24 ELR 20674 (1994) (*quoting* *Pike v. Bruce Church, Inc.*, 397 U.S. 137, 142 (1970)).

100. *See* Memorandum from the Director of the U.S. Geological Survey to the Director of the Fish and Wildlife Service (May 14, 2008), *available at* http://www.fws.gov/home/feature/2008/polarbear012308/pdf/Memo_to_FWS-Polar_Bears.PDF.

101. *See* Engel & Orbach, *supra* note 94 ("reductions in greenhouse gas emissions at the level of a municipality or even at the state level are generally too small to affect global concentrations"); Jonathan B. Wiener, *Think Globally, Act Locally: The Limits of Local Climate Policies*, 155 U. PA. L. REV. 1961, 1965 (2007) ("GHGs mix globally and have global impacts, local abatement actions pose local costs, yet deliver essentially no local climate benefits"). In another article, one author who thought California's state-level GHG regulation clearly should be upheld under *Pike* balancing explained that "A court need not decide with certainty whether the state's law will achieve its goals, for it assesses the law's putative benefits. As long as it is debatable that the law will advance the legitimate local interests, questions of efficacy and efficiency are for the legislature." Thomas Alcorn, *The Constitutionality of California's Cap-and-Trade Program and Recommendations for Design of Future State Programs*, 3 MICH. J. ENVTL. & ADMIN. L. 87, 175-76 (2013). The author supported this assertion with a citation to *Minnesota v. Clover Leaf Creamery Co.*, 449 U.S. 456, 458-60, 11 ELR 20070 (1981), where,

on state GHG emissions relative to global GHG emissions. California's approximate contribution to global GHG emissions is just 1% (estimated to be the second largest contribution in the United States behind Texas), and there are 14 states each with emissions that comprise less than 0.1% of global emissions.¹⁰² Furthermore, state-level emissions will likely comprise an even smaller portion of global GHG emissions in the future because GHG emissions from the United States are expected to remain relatively stable, while emissions from developing countries are expected to grow rapidly.¹⁰³ Therefore, it should not be assumed that a state can show non-negligible putative local benefits under *Pike* balancing as a result of potential in-state emission reductions.¹⁰⁴

B. Guidance From *Massachusetts v. EPA* on Local Benefits of GHG Emissions Reductions

Numerous articles have asserted that the standing holding from *Massachusetts* supports the notion that a state can successfully show putative local benefits for its GHG regulation under a *Pike* balancing.¹⁰⁵ Prof. Daniel Farber wrote

according to the author, "the Supreme Court upheld a Minnesota law that was as likely to achieve its goal as to undermine it." *Id.* at 176. It should be noted that *Clover Leaf Creamery Co.* also supports the proposition that a law should not be upheld under *Pike* balancing when the putative local benefits cannot theoretically be conceived by the reviewing court, even if the legislature has made findings to the contrary. See *Clover Leaf Creamery Co.*, 449 U.S. at 463-74. The issue identified in this Article is that in theory there could be some level of GHG emissions that is too miniscule for a reduction of those emissions to even theoretically have a noticeable impact on the climate. Further, there is no basis for assuming that any state's GHG emissions are automatically large enough to support a theoretical connection between in-state emission reductions and local benefits.

102. See *Climate Analysis Indicators Tool 2.0*, *supra* note 95. Based on 2010 data; includes emissions from LUCF.

103. U.S. ENERGY INFORMATION ADMINISTRATION. INTERNATIONAL ENERGY OUTLOOK 2013 tbl. 22, available at [http://www.eia.gov/forecasts/ieo/pdf/0484\(2013\).pdf](http://www.eia.gov/forecasts/ieo/pdf/0484(2013).pdf).

104. The district court in *Rocky Mountain Farmers Union* considered the relatively small size of California's emissions relative to global emissions when considering whether the LCFS served a legitimate local purpose for step 1 of the dormant Commerce Clause analysis. *Rocky Mountain Farmers Union v. Goldstene*, 843 F. Supp. 2d 1071, 1093, 42 ELR 20013 (E.D. Cal. 2011). The court, relying on *Massachusetts v. EPA*, concluded that the LCFS did serve a legitimate local purpose in reducing risks to California from climate change. *Id.* (citing *Massachusetts*, 549 U.S. at 516-26). See Kathryn Abbott, *The Dormant Commerce Clause and California's Low Carbon Fuel Standard*, 3 MICH. J. ENVTL. & ADMIN. L. 179, 209-13 (2013), for the identification of some potential flaws in relying on *Massachusetts v. EPA* to support the existence of a legitimate local purpose for California's LCFS under step 1 of dormant Commerce Clause analysis. These potential flaws touch on some of the same themes as the flaws presented in this Article for relying on *Massachusetts v. EPA* in the context of *Pike* balancing under step 2. It should be noted that finding the existence of a legitimate local purpose under step 1 does not necessarily lead to any particular result when assessing putative local benefits under step 2 (by definition, every state regulation assessed under step 2 must have already been found to have had a legitimate local purpose under step 1, otherwise step 2 would not have been reached). See *supra* Part II.A. Nevertheless, the district court's use of *Massachusetts v. EPA* to find the existence of a legitimate local purpose under step 1 reveals that it probably will find at least some degree of putative local benefits for the LCFS on the *Rocky Mountain Farmers Union* remand, and that it will likely use *Massachusetts v. EPA* for support.

105. See Daniel A. Farber, *Climate Change, Federalism, and the Constitution*, 50 ARIZ. L. REV. 879, 896-97 (2008); Mary Bede Russell, *What's It to You?: The Difficulty of Valuing the Benefits of Climate-Change Mitigation and the Need for a Public-Goods Test Under Dormant Commerce Clause Analysis*, 94 IOWA

the following in regards to evaluating state GHG regulations under *Pike* balancing:

One possible argument is that, although the states' interests [in the mitigation of climate change] are weighty, state legislation can only have a minimal effect in attaining those goals. This argument might be made against California's automobile standards for GHGs. This argument should fail. The Court rejected a similar argument in *Massachusetts v. EPA* in considering whether a federal action was too minor to have any effect on climate change by itself. . . .¹⁰⁶

Professor Farber then quoted language from *Massachusetts* about how federal regulation of a fraction of U.S. GHG emissions should not be looked at in isolation, but rather as a tentative step as part of a potentially more comprehensive federal response to climate change, and stated that "[s]imilar reasoning suggests that state efforts to combat climate change should not be downgraded because they are only capable of making small steps toward curing what is, after all, a very large problem."¹⁰⁷ Professor Farber did not mention the special solicitude component of the *Massachusetts v. EPA* standing analysis.

I. Should Special Solitude Impact *Massachusetts v. EPA*'s Guidance on the Application of *Pike* Balancing to State-Level GHG Regulations?

Although the local interest in *Massachusetts* was assessed in the context of standing rather than *Pike* balancing, it is reasonable to assume that if a state's local interest under a conventional injury, causation, and redressability standing analysis is concrete enough to support standing, then that same local interest should be recognized as a putative local benefit under *Pike* balancing. However, *Massachusetts* did not dictate whether, under a conventional standing analysis, Massachusetts' local interest in EPA regulation of GHG emissions from the transportation sector would be concrete enough to support standing by itself. As explained by Prof. Bradford Mank, "[t]he Court was ambiguous about whether Massachusetts satisfied normal standing requirements or met those requirements

L. REV. 727, 750, 772 (2009); see also Lawrence Fogel, *Serving a "Public Function": Why Regional Cap-and-Trade Programs Should Survive a Dormant Commerce Clause Challenge*, 2010 WIS. L. REV. 1313, 1340 (2010) (asserting in the context of a discussion about dormant Commerce Clause challenges to local GHG regulations that *Massachusetts v. EPA* "dismissed the above-discussed concerns of local governments enacting climate-change regulation"). One source stated that it is unclear whether *Massachusetts v. EPA* supports the showing of putative local benefits for a GHG regulation under a *Pike* balancing, but stated that the Court's reasoning from *Massachusetts v. EPA* leads "to an inference that California's interest in preventing sea-level rise and problems with the state water supply would be given weight by the Court." Andrew F. Adams, *It's Getting Hot in Here: California Senate Bill 1368 and the Dormant Commerce Clause*, 1 SAN DIEGO J. CLIMATE & ENERGY L. 287, 305-06 (2009).

106. Farber, *supra* note 105, at 897.

107. *Id.*

only because it was a state.”¹⁰⁸ The “only because it was a state” language refers to the Court finding that Massachusetts had special solicitude for purposes of the Court’s standing analysis.¹⁰⁹ While it’s true that the Court did not expressly say that Massachusetts would not have standing without the help of special solicitude, it is difficult to imagine why the Court would introduce special solicitude in a standing analysis for the very first time,¹¹⁰ and discuss its introduction extensively, if Massachusetts already would have standing under a conventional injury, causation, and redressability analysis.¹¹¹

If Massachusetts would not have had standing without special solicitude, then any argument relying on Massachusetts’ standing as support for a state being able to show concrete putative local benefits under *Pike* balancing includes an assumption that the state is entitled to the equivalent of the special solicitude offered to Massachusetts. That assumption would be incorrect. The two factors that contributed to Massachusetts receiving special solicitude in *Massachusetts v. EPA* were: (1) Massachusetts was attempting to protect “quasi-sovereign interests”; and (2) Congress had provided Massachusetts with a procedural right to challenge EPA’s denial of the rulemaking petition.¹¹² Neither of these two factors would apply to a state defending its GHG regulation under a dormant Commerce Clause challenge.

Defending a state-level GHG regulation under a dormant Commerce Clause challenge clearly does not involve a procedural right provided by Congress. For the quasi-sovereign interest factor, the Court’s reasoning behind why the factor contributed to Massachusetts receiving special solicitude reveals why it is not applicable. The Court first cited Justice Oliver Wendell Holmes’ majority opinion in the 1907 Supreme Court decision in *Georgia v. Tennessee Copper Co.*,¹¹³ a case where Georgia sought injunctive relief against private entities that allegedly were polluting Georgia’s air from facilities in Tennessee.¹¹⁴ Justice Holmes acknowledged that equitable relief would not be available to Georgia if it was treated like a private plaintiff, but maintained that Georgia was nevertheless entitled to an injunction under a more lenient standard because it was suing in its capacity as a quasi-sovereign rather than as a private plaintiff.¹¹⁵ The *Massachusetts* Court then analogized Georgia’s interest in *Tennessee Copper* with Mas-

sachusetts’ “well-founded desire to preserve its sovereign territory today.”¹¹⁶ The Court went on to say that:

When a State enters the Union, it surrenders certain sovereign prerogatives. Massachusetts cannot invade Rhode Island to force reductions in greenhouse gas emissions, it cannot negotiate an emissions treaty with China or India, and in some circumstances the exercise of its police powers to reduce in-state motor-vehicle emissions might well be pre-empted.¹¹⁷

The common theme from *Tennessee Copper* and the quasi-sovereign portion of *Massachusetts* is that a state, as a quasi-sovereign, has an enhanced ability relative to private parties to access federal courts when attempting to protect its quasi-sovereign interests from interstate or international problems. But a state defending its state-level GHG regulation under a dormant Commerce Clause challenge is not a case of a state attempting to access federal courts to solve an interstate or international problem. On the contrary, a state-level GHG regulation represents an attempt by a state to take what is at minimum an interstate (and more accurately international) problem into its own hands. In fact, the regulation could even be categorized as the type of “sovereign prerogatives” the Court in *Massachusetts* said that states surrendered when entering the Union.¹¹⁸ This categorization would be supported by a finding that the state-level GHG regulation violates the dormant Commerce Clause because the purpose of the dormant Commerce Clause is to restrict state action that is not considered to be within the powers that states reserved to themselves when they ratified the Constitution.¹¹⁹

In summary, the two factors that supported Massachusetts’ special solicitude were: (1) Massachusetts was attempting to protect “quasi-sovereign interests”; and (2) Congress had provided Massachusetts with a procedural right to challenge EPA’s denial of the rulemaking petition.¹²⁰ Neither of these should apply to a state defending its state-level GHG regulation under a dormant Commerce Clause challenge. Therefore, the only way that *Massachusetts v. EPA* can reasonably be interpreted to support the showing of a putative local benefit under *Pike* balancing applied to a state-level GHG regulation is if it signaled that Massachusetts would have had standing even without special solicitude. The Court’s incorporation of special solicitude as a new addition to its conventional standing analysis indicates that Massachusetts would not have had standing without it, which does not support the showing of a putative local benefit under *Pike* balancing applied to a state-level GHG regulation.¹²¹

116. *Massachusetts*, 549 U.S. at 519.

117. *Id.*

118. *Id.*

119. See *supra* Part II.A.

120. *Massachusetts*, 549 U.S. at 518-20.

121. See Abbott, *supra* note 104, at 209-13, for the identification of some potential flaws in relying on *Massachusetts v. EPA* to support the existence of a legitimate local purpose for California’s LCFS under step 1. These potential flaws touch on some of the same themes as the flaws presented in this

108. Bradford Mank, *Should States Have Greater Standing Rights Than Ordinary Citizens?: Massachusetts v. EPA’s New Standing Test for States*, 49 WM. & MARY L. REV. 1701, 1730 (2008).

109. *Massachusetts*, 549 U.S. at 518-20.

110. See Dru Stevenson, *Special Solicitude for State Standing: Massachusetts v. EPA*, 112 PENN ST. L. REV. 1, 19 (2007).

111. At a minimum, it is clear that the Court “relaxed” the conventional standing requirements for Massachusetts through its use of special solicitude, whether or not Massachusetts needed the relaxed requirements to have standing. See *Washington Envtl. Council*, 732 F.3d at 1144; Stevenson, *supra* note 110, at 9; Mank, *supra* note 108, at 1709; Calvin Massey, *State Standing After Massachusetts v. EPA*, 61 FLA. L. REV. 249, 252 (2009).

112. *Massachusetts*, 549 U.S. at 518-20.

113. *Georgia v. Tennessee Copper Co.*, 206 U.S. 230 (1907).

114. *Id.* at 236.

115. *Id.* at 237.

2. Incremental Steps and Meaningful Contributions

Even if it was assumed that Massachusetts did not receive any special treatment under special solicitude and that Massachusetts had standing based on the Court's conventional injury, causation, and redressability analysis by itself, it is still not safe to assume this would support a state's showing of putative local benefits under *Pike* balancing for its state-level GHG regulation.

A key question addressed by the conventional standing analysis in *Massachusetts* is whether the amount of GHG emissions from the transportation sector in the United States was significant enough to satisfy causation requirements (i.e., whether there was enough of a causal link between Massachusetts' alleged injury from climate change and the GHG emissions from the U.S. transportation sector).¹²² The Court found a sufficient causal link based on: (1) "tentative step" reasoning (that federal regulation of a fraction of U.S. GHG emissions should not be looked at in isolation, but rather as a tentative step as part of a potentially more comprehensive federal response to climate change); and (2) "meaningful contribution" reasoning (that even if regulation of GHG emissions from the U.S. transportation sector were to be looked at in isolation, their 6% contribution to global GHG emissions still

would qualify as a "meaningful contribution" to global climate change).¹²³

Applying the tentative step reasoning to a state-level GHG regulation under *Pike* balancing would allow a state to argue that the entire amount of emissions within the state should be considered for putative local benefit purposes even if the regulation itself only targets a subset of state-level emissions.¹²⁴ But the challenge for a state would be showing that its GHG emissions (either the emissions targeted directly by the regulation or all of the emissions within the state under "tentative step" reasoning) make a meaningful contribution to global climate change.

When considering what constitutes a meaningful contribution to global climate change, it should be noted that there must be some level of GHG emissions that the Court would have considered not enough to be a meaningful contribution, otherwise it would have been frivolous for the Court to examine the quantity of GHG emissions from the U.S. transportation sector and consider that quantity in the context of global GHG emissions before declaring that quantity a meaningful contribution. In addition, common sense dictates that extremely small amounts of GHG emissions, such as the CO₂ emissions that occur from the operation of a single gas grill in a backyard, do not contribute in a meaningful way to global climate change.

But we know very little about where the line is between meaningful and nonmeaningful contributions. The two reference points we have are: (1) the Court in *Massachusetts* thought that 6% of global GHG emissions was meaningful¹²⁵; and (2) the Ninth Circuit in *Washington Environmental Council* implied that the oil refineries' contribution of 5.9% of only Washington state's GHG emissions was not enough.¹²⁶ Even if California's 1% contribution to global GHG emissions (second largest of any state) would be considered meaningful, it is difficult to foresee any court concluding that Rhode Island's contribution of 0.03% qualifies as a meaningful contribution to global climate change.¹²⁷ Given the uncertainty about whether any state's contribution to global GHG emissions would be considered a meaningful contribution under *Massachusetts*, it is unclear whether that decision's standing analysis would

Article for relying on *Massachusetts* in the context of *Pike* balancing under step 2. However, Abbott's Note, *The Dormant Commerce Clause and California's Low Carbon Fuel Standard*, does not appear to be as concerned about the potential use of *Massachusetts* in showing putative local benefits for the LCFS under step 2, or with the LCFS having any problem surviving *Pike* balancing in general. Without any mention of potential reliance on *Massachusetts v. EPA* in the context of *Pike* balancing (even though such reliance is likely on the *Rocky Mountain Farmers Union* remand, see *supra* note 104), the Note asserted that "California's sovereign interest in protecting itself, both as a State and as a land-owner, and in protecting its citizens and businesses, from the projected damage wrought by climate change would almost certainly outweigh . . . losses by some Midwestern ethanol producers." *Id.* at 227. The Note went on to say that "given how lenient the *Pike* test generally is, it is unlikely that [the LCFS] would fail. This is especially likely given how great the benefits are that California hopes to obtain from reducing greenhouse gas emissions." *Id.* But it is unclear why logical problems associated with relying on *Massachusetts* for establishing a legitimate local purpose under step 1 should not also apply when considering the weight of putative local benefits under step 2 *Pike* balancing. It is true that courts apply strict scrutiny review to step 1 when assessing whether a state law is discriminatory and serves a legitimate local purpose, which is a less deferential form of review than that applied to step 2 *Pike* balancing. See Denning, *Reconstructing the Dormant Commerce Clause*, *supra* note 21, at 500. This could lead one to believe that a court finding a state-level GHG regulation to be aimed at a legitimate local purpose under step 1 would give a certain amount of weight to the putative local benefit under step 2. But the finding that the purported purpose of a regulation is legitimate in a categorical sense under step 1 does not indicate how a regulation will fare under step 2 because step 2 assesses the putative local benefit *relative* to the burden on interstate commerce. See *supra* Part II.A. Every state regulation struck down under step 2 must already have been found to have had a legitimate purpose in a categorical sense under step 1, but in such cases, the putative local benefit involved was found not to have come close to justifying the burden on interstate commerce. See, e.g., *Yamaha Motor Corp., U.S.A. v. Jim's Motorcycle, Inc.*, 401 F.3d 560, 569-74 (4th Cir. 2005) (invalidating a Virginia law that limited the ability of motorcycle manufacturers to open new dealerships in the state).

122. See *Massachusetts*, 549 U.S. at 523-25.

123. *Id.*

124. It would not be appropriate to view the state-level GHG regulation as a tentative step to national-level GHG regulations or even international climate change agreements because a state has neither the power to regulate beyond its borders nor the power to enter treaties with other countries. See *supra* Part II.A.; *supra* note 14; U.S. CONST. art. I, §10, cl. 1.

125. *Massachusetts*, 549 U.S. at 525.

126. See *Washington Envtl. Council*, 732 F.3d at 1144-46. The court in that case did not explicitly say the quantity was not a meaningful contribution, but instead that because the plaintiffs did not show how the quantity of emissions compared to national or global GHG emissions, the court could not evaluate whether it was a meaningful contribution. Considering that there was an estimated emissions value for the refineries, and that global GHG emission estimates are widely available, it appears that the problem was not one of being unable to understand how emissions from the refinery compared to global emissions, but rather that the emissions from the refinery were too small of a percentage of global GHG emissions to be considered a meaningful contribution on their face, without some additional showing being made by the plaintiffs.

127. For source of emission estimates, see *supra* note 95.

support a state's showing of putative local benefits for *Pike* balancing purposes even under the flawed assumption that the benefit Massachusetts received under special solicitude should be applied to the state GHG regulation.

C. *Jumping the Putative Local Benefit Hurdle: How State-Level GHG Regulations Can Survive Pike Balancing Without the Support of Massachusetts v. EPA*

I. Establishing a Potential Connection Between a State-Level Regulation and GHG Emissions Occurring Outside the State's Borders

As explained in Part III.A., it should at least be somewhat challenging for a state to show putative local benefits associated with in-state emission reductions under *Pike* balancing. However, reducing in-state emissions is not the only way a state could achieve local climate benefits through a nondiscriminatory state-level GHG regulation. Local benefits could also result if the state-level regulation helps to: (1) incentivize the development of GHG-reducing technologies that are ultimately deployed beyond the state's borders; (2) experiment with innovative GHG policy designs that inform and encourage policymaking in other states or at the federal level; or (3) spur federal action to address national GHG emissions by contributing to inconsistent state-level policies that make a consistent national-level policy relatively attractive in comparison.¹²⁸ Under these three scenarios, the state-level GHG regulation could impact a much larger portion of global GHG emissions than merely its own state's contribution, and therefore the potential local benefits resulting from the state-level GHG regulation could be much more significant than what would result from only in-state emission reductions.

In addition, a state-level GHG regulation could be viewed as more than just the action of a single state.¹²⁹ As a result of the absence of comprehensive federal action to address GHG emissions, GHG mitigation measures have been implemented at the state-level across the United States.¹³⁰ A state could argue that its state-level GHG regulation is part of a larger movement by states to reduce GHG emissions and that the collective amount of GHG emissions of the states involved in the movement is large enough to make a noticeable change to atmospheric concentrations of GHGs.¹³¹ This state-level movement has

already been formalized to a certain extent in multiple regional GHG compacts.¹³² The argument would be especially attractive for states with relatively small emissions relative to other states.

It may also be possible for a state to show non-climate-related benefits, depending on the specifics of the regulation. For California's LCFS, while reducing the use of certain fuels may have non-climate-related benefits (such as improved air quality), these types of non-climate benefits should not be considered under a *Pike* balancing applied to the LCFS because the LCFS distinguishes fuels based solely on their carbon content (the carbon content of the fuel does not directly relate to local air quality or other non-climate environmental quality indicators; it is simply a proxy for how much GHG emissions will result from combustion of the fuel).¹³³ In other words, for California's LCFS, the fuels are distinguished based solely on the amount of GHGs that result from their combustion, which means the only local benefits that could be shown by the LCFS would need to relate to climate-related impacts (since climate impacts are what would be affected by the reduction in the carbon content of fuels under the regulation). But if a state-level regulation targets certain fossil fuels on other grounds (such as their detrimental effects on local air quality resulting from their non-GHG pollution characteristics), and reducing the use of those fossil fuels would result in ancillary GHG benefits, then the non-climate-related benefits could be used as a hook to show putative local benefits under *Pike* balancing (assuming no federal preemption problems under the CAA).

If at least one of these arguments can be used to establish even the potential existence of concrete climate-related local benefits without readily apparent burdens to interstate commerce that are "clearly excessive"¹³⁴ to the local benefits, then the state regulation will likely survive *Pike* balancing based on the examination of *Pike* balancing cases above in Part II.C. Of course, the burdens on interstate commerce that result from a regulation depend entirely on the nature of the regulation. It is difficult to predict whether a given incidental burden on interstate commerce will be fatal to the state regulation because the incidental burden on interstate commerce must be compared to the putative local benefit to see whether it is "clearly excessive." But given the deferential nature of *Pike* balancing and the paucity of cases where state regulations failed *Pike* balancing after showing the potential existence of concrete putative local benefits, a state showing that its GHG regulation could contribute to emission reductions beyond its borders (through at least one of the scenarios just described) should have good odds of successfully defending its regulation.¹³⁵

128. For an analysis of these potential drivers of local benefits, see Wiener, *supra* note 101, at 155. It has also been suggested that experimentation with innovative policy designs that inform and encourage policymaking in other states or at the federal level is a desirable activity for the nation as a whole that perhaps should give states "a little more constitutional leeway to enact environmental regulations that arguably burden interstate commerce impermissibly." Peter Carl Nordberg, *Excuse Me, Sir, But Your Climate's on Fire: California's S.B. 1368 and the Dormant Commerce Clause*, 82 NOTRE DAME L. REV. 2067, 2092 (2007).

129. Alcorn, *supra* note 101, at 146-47.

130. See Center for Climate and Energy Solutions, *supra* note 1.

131. See Alcorn, *supra* note 101, at 146-47.

132. See Center for Climate and Energy Solutions, *Multi-State Climate Initiatives*, <http://www.c2es.org/us-states-regions/regional-climate-initiatives> (last visited Jan. 12, 2013).

133. *Rocky Mountain Farmers Union*, 730 F.3d at 1080.

134. *Pike*, 397 U.S. at 142.

135. The exception would probably be the argument that the state-level GHG regulation could contribute to a patchwork of inconsistent state-level policies that make a consistent national policy relatively attractive in comparison. Because the patchwork of inconsistent regulations would itself be a bur-

2. Arguing That State-Level GHG Regulations Are Outside the Bounds of *Pike* Balancing Based on *Davis*

Perhaps the most effective argument a state could make to defend its GHG regulation under *Pike* balancing is to argue that *Pike* balancing is simply inapplicable to a state-level GHG regulation because the costs and benefits of such a regulation have the same characteristics that made *Pike* balancing unsuitable for Kentucky's income tax scheme in *Davis*.¹³⁶ In *Davis*, the impact of Kentucky's tax scheme on bond market activity and associated investment flows both inside and outside of Kentucky were deemed to be too complex and uncertain for the judiciary to "draw reliable conclusions of the kind that would be necessary for [the plaintiffs] to satisfy a *Pike* burden . . ." ¹³⁷

If *Pike* balancing was deemed inappropriate for Kentucky's tax scheme, then a strong argument could be made that it is inappropriate for a state-level GHG regulation. Both the ultimate effect of a state-level GHG regulation on global GHG emissions, and the connection between a specified level of GHG emissions and climate impacts, are extremely complex and difficult to document.¹³⁸ An effort to weigh the costs of a state-level GHG regulation with putative local benefits resulting from the regulation would likely involve uncertainties at least on par with those involved in *Davis*, regardless of the size of the state's GHG emissions. By showing that *Pike* balancing is inapplicable to a state-level GHG regulation, a state could completely

avoid the question of whether the magnitude of its emissions relative to global GHG emissions supports a showing of concrete putative local benefits.

IV. Conclusion

The dormant Commerce Clause has long been a controversial doctrine, and it appears that the Supreme Court might be gradually weakening its restrictions. However, as the case law currently stands, the dormant Commerce Clause continues to present a barrier to state-level regulations, and it may ultimately restrict the ability of states to implement GHG regulations. An unsettled question soon to be addressed by a district court on remand in *Rocky Mountain Farmers Union* is the extent to which a state can show putative local benefits resulting from its state-level GHG regulation under *Pike* balancing.¹³⁹ While there are challenges with a state showing such in-state benefits, there are also arguments for showing in-state benefits that courts might find compelling. By arguing that a state-level GHG regulation could impact a much larger portion of global GHG emissions than merely its own state's contribution, and by arguing in the alternative that *Pike* balancing should not even be applied to a state-level GHG regulation in the first place according to *Davis*, states can maximize the chances of their nondiscriminatory GHG regulations surviving dormant Commerce Clause challenges.

den on interstate commerce, this argument would have the flaw of coupling the potential local benefit with a burden on interstate commerce.

136. See Russell, *supra* note 105 (identifying this argument).

137. *Dep't of Revenue of Ky. v. Davis*, 553 U.S. 328, 353-55 (2008).

138. *Washington Envtl. Council*, 732 F.3d at 1143 (citing Memorandum from the Director of the U.S. Geological Survey to the Director of the Fish and Wildlife Service (May 14, 2008), available at http://www.fws.gov/home/feature/2008/polarbear012308/pdf/Memo_to_FWS-Polar_Bears.PDF).

139. *Rocky Mountain Farmers Union*, 730 F.3d 1070.