A Climate Change Lens on the Dormant Commerce Clause, Lifecycle GHG Taxes, and In-State RPSS Requirements

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Under the “Dormant Commerce Clause” of the United States Constitution, states are generally not permitted to discriminate against—treat differently—identical or “like” products solely based on where the product was produced or manufactured. For example, Massachusetts cannot impose a higher tax or greater marketing restrictions on Vermont-produced milk than it does on Massachusetts-produced milk solely because the Vermont milk was produced in Vermont. Similarly, under international trade law, discrimination by one nation against like products produced by another nation is generally impermissible.

But when are products “alike”? A key question in any Dormant Commerce Clause dispute is whether a product is really the same as, really identical to, or like, the product that allegedly is receiving relatively favored treatment. If Vermont and Massachusetts milk are like products, then, as a matter of precedent and logic, courts should scrutinize and generally invalidate efforts by Massachusetts to impose greater taxes or marketing restrictions on Vermont milk than on Massachusetts milk. But if Vermont milk is not a like product, if it is different from Massachusetts milk in material ways that implicate the state police power to protect health and welfare, then even facial discrimination against Vermont milk may be justified, and a more deferential, nuanced, and measured form of judicial review is appropriate.

In this Article, we argue that what constitutes a like product for Dormant Commerce Clause purposes should be seen through a climate change lens. Without the climate change lens, some products may appear alike that are actually different in ways that directly implicate traditional state police power concerns. Lower federal courts have not yet embraced what we call the climate change lens. However, very few cases involving climate-change-related state legislation have been litigated, and there is indication in at least one recent federal appellate court decision that a climate change lens may be viable.

Our goal here is two-fold: first, to show that a climate change lens can make us understand that some apparently discriminatory state treatment of like products is in fact differential treatment of different products, and, second, that there is precedential basis for courts adopting the climate change lens and hence a more deferential posture toward state climate change initiatives.

We are focused on two kinds of state initiatives. The first is, as in California’s low carbon fuel standard, when a state assigns a cost of carbon to a fuel based on lifecycle greenhouse gas emissions, with the near inevitable result that otherwise identical fuels produced far away and out-of-state will have a higher assigned carbon cost than fuels produced in-state. The second is, as in a number of state Renewable Portfolio Standards (RPSSs), where a state requires or incentivizes the satisfaction
of the RPS by renewable fuel production in the state rather than through sole reliance on imports. Viewed outside the climate change lens, both these situations involve discrimination against like products. Viewed through a climate change lens, they do not. The climate change lens—and whether courts choose to see through it—matters a great deal.

We view this lens as having three aspects. First, the GHG, and hence climate change, impact of any product depends on the lifecycle emissions associated with the product. A state’s residents do not confront merely an ideological or philosophical problem in climate change. It is instead a tangible—and for some states existential—problem in terms of the economic and environmental impacts associated with such fundamental health and welfare issues as coastal flooding, drought, wildfires, and invasive species. A court should understand that the lifecycle emissions of a product directly implicates traditional state police power concerns and in that sense should be understood as an integral characteristic of the product. Thus, ethanol from Ohio is not the same product as ethanol from California. California’s use of the Ohio ethanol means more net GHG emissions and a greater likelihood of real, material climate change impacts in California that will have impacts on the material circumstances of the lives of Californians. We believe this part of the climate change lens finds support in, even flows from, the reasoning adopted by the Supreme Court in Massachusetts v. EPA.

Second, energy produced in-state is not necessarily the same, or a like product, as energy produced elsewhere and then imported because the production itself may have consequences for the environment within the state and hence for the health and welfare of state residents. When a state requires or incentivizes the production of a non-polluting renewable source within a state to meet part of state energy needs, a corresponding amount of dirtier, polluting energy production within the state is much more likely to cease as a consequence. Thus, imported wind power is different, and is an unlike product, to locally required or incentivized wind power because a characteristic of the latter, but not the former, is that the former delivers a reduction in local air pollutants and consequent reduction in harms associated with local air pollutants.

Third, local energy is a different product seen from a climate change lens because it is more robust with respect to climate-change-related interferences with transport and transmission—interferences from such things as extreme weather. This part of the climate change lens one might call a climate change adaptation lens.
What would it mean if courts were to adopt the climate change lens? It would not mean that automatically all climate change or other environmentally-oriented state legislation would be upheld where distinctions were made between in-state and out-of-state products. Instead, the lens would free up courts not to impose the near strict scrutiny of “facially discriminatory” state legislation that has dominated much of the Dormant Commerce Clause jurisprudence. It would allow the courts to engage in a more contextual, and more deferential, but not toothless, review—a balancing test that courts routinely use to decide Dormant Commerce Clause cases where discrimination does not amount to simple economic protectionism.

We point to two models, or at least inspirations for such review. The first is the World Trade Organization’s decisions in the *tuna-dolphin* and *shrimp-turtle* line of decisions. The second is the United States Supreme Court’s decision in *United Haulers*, which, we argue, comes close to endorsing a contextual, more deferential review. Of course what we propose here, the adoption of the climate change lens, certainly would require an extension of, and not just a simple application of *United Haulers*. Still, *United Haulers*’ embrace of a broader market participant exception and traditional government function exception to the Dormant Commerce Clause plus its express invocation of policy rationales that move the Dormant Commerce Clause closer to a sensible protectionism-focused substantive review rather than a reflexive form of strict scrutiny provides a good beginning place for moving forward.

In Part I we trace the Dormant Commerce Clause pre-*Haulers* and explain the California treatment of out-of-state energy sources and RPSS’ preferences and requirements for in-state renewable production and explain why such state measures are subject to being invalidated, at least under pre-*Haulers* case law (and perhaps even now too).

In Part II, we explore the climate change lens and its three aspects: the product as not alike because product use may have differential local climate change effects; the product as not alike because in-state renewable production that displaces in-state non-renewable production has local environmental effects regarding conventional pollutants; and the product as not alike because local energy is more climate change adaptive than imported energy.

In Part III, we argue that adopting judicial adoption of the climate change and more deferential review finds support in evolving WTO law and relatively recent Supreme Court decisions.
I. THE DORMANT COMMERCE CLAUSE

A. California’s Low Carbon Fuel Standard and State RPS Requirements

Several states have enacted laws that attempt to reduce the carbon intensity of fuels burned in that state. In California, for example, the Low Carbon Fuel Standard (LCFS) has as its stated goal to reduce greenhouse gas emissions to 1990 levels by 2020. Pursuant to this law, the California Air Resources Board (CARB) adopted an LCFS in June 2007. The purpose of the LCFS is “to implement a low carbon fuel standard, which will reduce greenhouse gas emissions by reducing the full fuel-cycle, carbon intensity of the transportation fuel used in California.” California’s LCFS estimates carbon emissions related to a fuel’s lifecycle, including extraction, refining, and transportation, and establishes different standards for gasoline and diesel fuels, to reduce the carbon intensity of fuel by 10% by the year 2020. Each fuel is assigned a “carbon intensity value.” These “carbon intensity values” differ depending on the location of the fuel’s production, among other factors, with generally more favorable scores assigned to California production than to Midwest production, in part to account for transportation costs. CARB estimated that the effects of this law would include a reduction in the volume of fuel imported from other states, and increased California production of biofuels, which would increase employment in the state.

Similarly, state RPS requirements “require[] all retail utilities in a given state to prove that a set percentage of its total commercially available supply is derived from renewable energy resources.” The rub is that “[s]everal state RPSs include in-state delivery or location requirements and incentives, while other states limit the amount of out-of-state power that a utility may use to satisfy the RPS. In addition, some states “carve-
out” a portion of energy that a provider must obtain from in-state distributed generation.\textsuperscript{8}

Both the LCFS and RPSs, then, include some form of discrimination based on location, often distinguishing between in-state and out-of-state production. The question is whether this can survive dormant Commerce Clause challenge under the current doctrine—or whether the doctrine should be recast with climate change in mind.

\textbf{B. Overview of Dormant Commerce Clause Doctrine}

The history of the dormant commerce clause is one of shifting categories and a growing, though often unexamined, belief in the desirability of a single market unconstrained by state borders. It has been this belief, more than the words of the Constitution itself, which has driven the doctrine. In Article I, Section 8, the Constitution simply states that Congress shall have the power “To regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes.” Contemporary dormant Commerce Clause jurisprudence holds that, because Congress is vested with the power to regulate inter-state commerce, the states must be divested of it. But of course this does not logically follow from the Constitution’s words, and indeed such an interpretation was relatively late in coming.

It wasn’t until 1851, in \textit{Cooley v. Board of Wardens}\textsuperscript{9}, that the Supreme Court began fashioning dormant Commerce Clause jurisprudence. Even then, the vesting of Commerce Clause power in Congress was not held to deprive the states of all power to regulate interstate commerce. As the Court opined: “It is the opinion of a majority of the court that the mere grant to Congress of the power to regulate commerce, did not deprive the States of power to regulate pilots, and that although Congress had legislated on this subject, its legislation manifests an intention, with a single exception, not to regulate this subject, but to leave its regulation to the several states.”\textsuperscript{10} Essentially, \textit{Cooley} established two distinct areas in interstate commerce: an exclusive zone and a concurrent zone. The exclusive zone includes matters that necessitate a national-level rule; consequently this zone is off-limits to states. The concurrent zone included matters of a more local concern; assuming Congress has not chosen to take action in the particular arena being governed, states are entitled to

\begin{enumerate}
\item \textit{Cooley v. Board of Wardens}, 53 U.S. 299 (1851).
\item \textit{id.} at 320.
\end{enumerate}
regulate the matter as they see fit. In *Cooley*, the state of Pennsylvania was essentially guaranteeing business for a local industry. The Court allowed this burden to commerce because Congress had not initiated any regulation of the industry practices in question.

After *Cooley*, courts struggled with how to tell what zone a particular subject matter was in, and what exactly a state could regulate. Over time the courts began fashioning a “direct vs. indirect” test, whereby a state’s “direct” regulation of interstate commerce was void, while a regulation that has mere “indirect” effects on interstate commerce was not void.\(^\text{11}\) Courts also distinguished between “commerce” and other activities such as “manufacturing”\(^\text{12}\) or “production.”\(^\text{13}\) Over time, however, these distinctions proved unworkable. In *Wickard v. Filburn*, the Supreme Court finally put them to rest, holding that “questions of the power of Congress are not to be decided by reference to any formula which would give controlling force to nomenclature such as ‘production’ and ‘indirect’ and foreclose consideration of the actual effects of the activity in question upon interstate commerce.”\(^\text{14}\)


If the commerce clause were construed to reach all enterprises and transactions which could be said to have an indirect effect upon interstate commerce, the federal authority would embrace practically all the activities of the people, and the authority of the state over its domestic concerns would exist only by sufferance of the federal government. Indeed, on such a theory, even the development of the state’s commercial facilities would be subject to federal control. . . . The development of local resources and the extension of local facilities may have a very important effect upon communities less favored, and to an appreciable degree alter the course of trade. The freedom of local trade may stimulate interstate commerce, while restrictive measures within the police power of the state, enacted exclusively with respect to internal business, as distinguished from interstate traffic, may in their reflex or indirect influence diminish the latter and reduce the volume of articles transported into or out of the state. . . . the fact that there may be an indirect effect upon interstate commerce does not subject the parties to the federal statute, notwithstanding its broad provisions. This principle has frequently been applied in litigation growing out of labor disputes. *Id.*

\(^{12}\) See *Kidd v. Pearson*, 128 U.S. 1, 20 (1888) (“Manufacture is transformation—the fashioning of raw materials into a change of form for use. The functions of commerce are different. The buying and selling and the transportation incidental thereto constitute commerce; and the regulation of commerce in the constitutional sense embraces the regulation at least of such transportation.”).

\(^{13}\) See *Carter v. Carter Coal Co.* 298 U.S. 238, 303 (1936) (“production is not commerce; but a step in preparation for commerce.” (citing Chassaniol v. Greenwood, 291 U.S. 584, 587 (1934))).

The evolution of the doctrine, then, was as much a function of the unworkability of the early categories as of their undesirability. The early doctrine was considered too indeterminate, too easily manipulatable, and also anathema to the rapid nationalization of commerce that was considered so important to American society. In other words, the doctrine was not the inevitable or logical product of the Constitution’s words, but rather an expression of courts’ and society’s needs. As those needs changed, so did the doctrine.

After Wickard, courts adopted a framework that subjects all state regulation that facially discriminates against out-of-state entities to strict scrutiny. The Court saw such facial discrimination as akin to “economic isolation” and “protectionism.” Moreover, “where simple economic protectionism is effected by state legislation, a virtually per se rule of invalidity has been erected.” A facially discriminatory state law will only be upheld if the state can show that “the discrimination is demonstrably justified by a valid factor unrelated to economic protectionism.” This requires the state to show that there is a “legitimate local purpose” and that no nondiscriminatory means are adequate to fulfill that purpose. This has proven to be a barrier that few state laws can overcome.

Even if a state law does not facially discriminate against out-of-state commerce, it still may face strict scrutiny under the dormant Commerce Clause if it has either a discriminatory effect or a discriminatory purpose. As one court has put it: “[a] statutory scheme ‘can discriminate against out-of-state interests in three different ways: (a) facially, (b) purposefully, or (c) in practical effect.’” A discriminatory purpose can be gleaned from legislative history indicating a motivation to protect in-state entities at the expense of out-of-state entities, while a discriminatory effect can be gleaned from comparing the effects on in-state and out-of-state entities under the law. In each of these cases, courts must judge whether

15. See H.P. Hood & Sons, Inc. v. Du Mond, 336 U.S. 525, 537–38 (“[T]he principle that our economic unit is the Nation ... has as its corollary that the states are not separable economic units”).
17. Id. at 624.
22. See id. (disagreeing with the District Court’s conclusion that there was a discriminatory purpose).
23. Id. (holding that there was no discriminatory effect).
“similarly situated” entities or “like” products are treated differently based on their location within or without the state.24

Where a law does not discriminate against out-of-state commerce, but regulates even-handedly, the Court adopts a flexible balancing test that is much more favorable to state law. “Where the statute regulates evenhandedly to effectuate a legitimate local public interest, and its effects on interstate commerce are only incidental, it will be upheld unless the burden imposed on such commerce is clearly excessive in relation to the putative local benefits.”25 However, even under this more flexible test, state laws that have the effect of favoring local producers over out-of-state producers have routinely been struck down.26

C. The Vulnerability of State Laws to Dormant Commerce Clause Challenge

As should be obvious, state LCFS and RPS laws that overtly discriminate against out-of-state production may have a difficult time surviving dormant Commerce Clause challenges under the current doctrine. In Wyoming v. Oklahoma,27 the Supreme Court subjected to strict scrutiny an Oklahoma law that required in-state utilities to fill 10% of their needs for fuel from Oklahoma coal. The Court held that the law “expressly reserves a segment of the Oklahoma coal market for Oklahoma-mined coal, to the exclusion of coal mined in other States,” and that “[s]uch a preference for coal from domestic sources cannot be characterized as anything other than protectionist and discriminatory, for the Act purports to exclude coal mined in other States based solely on its origin.”28

Indeed, at the District Court level, California’s LCFS was struck down for precisely this reason. First, the court held that California and Midwest ethanol were “like products”: “the ethanol made in the Midwest and California are physically and chemically identical when ultimately mixed.

24. Id. (holding that there was no discriminatory effect where in-state and out-of-state opticians were treated the same, and the law treated opticians differently from optometrists and ophthalmologists, because opticians, on the one hand, and optometrists and ophthalmologists, on the other hand, were “not similarly situated.”).
with petroleum.” The court clearly judged the identity of each product by simply looking at the product itself, not by looking at how it was made or transported. Then the court held that the LCFS, by assigning different carbon intensities to Midwest ethanol versus California ethanol, “differentiate[s] among ethanol pathways based on origin.”\textsuperscript{30} The court held that, even though part of the higher carbon intensity assigned to Midwest ethanol was a function of transportation, this was nonetheless a “factor[] that discriminate[s] based on location,” and that “CARB may not impose a barrier to interstate commerce based on the distance that the product must travel in interstate commerce.”\textsuperscript{31}

Before the Ninth Circuit, however, the different carbon intensities were viewed under a much different lens. While the Court acknowledged that “ethanol from every source has ‘identical physical and chemical properties,’”\textsuperscript{32} this was not the end of its analysis. The Court noted that the different ethanol pathways—the “lifecycle” carbon intensities assigned to different sources of ethanol—are “based on scientific data, not an ungrounded presumption that unfairly prejudices out-of-state ethanol.”\textsuperscript{33} The Court noted that “[i]f we ignore these real differences between ethanol pathways, we cannot understand whether the challenged regulation responds to genuine threats of harm or to the mere out-of-state status of an ethanol pathway. All factors that affect carbon intensity are critical to determining whether the Fuel Standard gives equal treatment to similarly situated fuels.”\textsuperscript{34}

Implicit in the Ninth Circuit’s analysis is that whether a fuel is “similarly situated” depends not only on the physical or chemical properties of the fuel, but also how that fuel is made. Indeed, much of the Ninth Circuit’s opinion consists of the Court discussing California’s reasonable decision to treat ethanol sources differently, by virtue of their carbon intensity, in order to combat climate change. In essence the Court views CARB’s efforts through a “climate change lens” and suggests that treating otherwise “like” products differently is not only a reasonable, but perhaps also a necessary element of state efforts. As the Court noted, the dormant Commerce Clause is not “a blindfold” and “does not invalidate by strict

\begin{footnotesize}
\textsuperscript{29.} Rocky Mt. Farmers Union v. Goldstene, 843 F. Supp. 2d 1071, 1088 (E.D. Cal. 2011).
\textsuperscript{30.} Id. at 1087.
\textsuperscript{31.} Id. at 1089.
\textsuperscript{32.} See Rocky Mt. Farmers Union v. Corey, 2013 U.S.App. LEXIS 19258, at 40 (9th Cir. 2013).
\textsuperscript{33.} Id. at 42.
\textsuperscript{34.} Id.
\end{footnotesize}
scrutiny state laws or regulations that incorporate state boundaries for good and non-discriminatory reason.”

II. THE CLIMATE CHANGE LENS

A. The Importance of Differential Local Effects

The Ninth Circuit’s opinion in Rocky Mountain Farmers Union v. Corey raises many important questions, including whether courts are prepared to view dormant Commerce Clause challenges through a climate change lens. One important threshold issue is whether any individual state can have a “legitimate local public interest” in combatting global warming. On the one hand, global warming caused by greenhouse gas emissions is obviously a global problem that requires a global solution. Even considering the United States on its own, greenhouse gas emissions are a collective problem. For example, if one state or region massively increases its GHG emissions, that would negate any reductions in other states or regions. Thus, one can argue that global warming, to the extent it is not purely a global problem, and is a U.S. problem, is inherently a national or federal problem. From this vantage, one could argue that the citizenry of no individual State—and hence no State government, no State—has any particular or special interest in global warming and addressing it. All United States citizens have an interest in global warming and thus no State has a special or particular interest a distinctive State interest.

The United States Supreme, however, disavowed this argument, which was squarely put to it in Massachusetts v. EPA, and affirmed that states do and can have an individual interest in combatting global warming. In Massachusetts v. EPA, the Court addressed the question whether a State such as Massachusetts or California had standing to sue the federal government for allegedly violating the Clean Air Act directive to regulate carbon dioxide and other greenhouse gasses as air “pollutants.” Writing for the Court, Justice Kennedy affirmed that a State as a State suffers a particularized injury from global warming because it may suffer particular adverse effects, and thus has an interest, a particular interest, in restraining or reducing greenhouse gas emissions:

35. Id. at 1107.
That these climate-change risks are “widely shared” does not minimize Massachusetts’ interest in the outcome of this litigation. According to petitioners’ unchallenged affidavits, global sea levels rose somewhere between 10 and 20 centimeters over the 20th century as a result of global warming. These rising seas have already begun to swallow Massachusetts’ coastal land. Because the Commonwealth “owns a substantial portion of the state’s coastal property,” it has alleged a particularized injury in its capacity as a landowner. The severity of that injury will only increase over the course of the next century: If sea levels continue to rise as predicted, one Massachusetts official believes that a significant fraction of coastal property will be “either permanently lost through inundation or temporarily lost through periodic storm surge and flooding events.” Remediation costs alone, petitioners allege, could run well into the hundreds of millions of dollars.

Massachusetts v. EPA thus holds that a State, acting on behalf of its citizens, has a particularized interest in how much greenhouse gas emissions will be on a national scale as a result of federal law. It would seem to follow that the State also has a particularized interest in how much greenhouse gas emissions can be attributed to the citizens of the States, because those emissions are also logically tied to the possible particularized injuries would or could suffer from global warming. Indeed, a State would seem to have even more legitimate standing to address emissions attached to its own citizens, as opposed to those generated nationally, precisely because the State’s citizens are closer to and more intimately connected to the State than they are the federal government and federal law.

Massachusetts v. EPA thus arguably implies that a State can take actions to limit or reduce the greenhouse gas emissions attributable to its citizens. But that does not necessary answer the question of exactly what scope of actions the State may take to accomplish that purpose. That is a central issue posed by California’s LCFS and the litigation it has spawned. As noted supra, under California law, a carbon weighting is assigned to fuels used in California based on estimate of the lifetime carbon emissions associated with the fuel. Thus, transportation-related emissions factor into the carbon weighting, including emissions related to moving the feedstocks to the fuel production plant and emissions related to moving the fuel to the end consumers in California. Midwestern ethanol producers argued that the inclusion of transportation-related emissions discriminated against Midwestern-produced ethanol and in favor of California-produced ethanol. The Midwestern ethanol producers argued that their ethanol was identical to California ethanol, and hence a like product for purposes of the Dormant Commerce Clause purposes, and the District Court adamantly agreed: although the District Court acknowledged that this was not a classic case of economic protectionism, “physically and chemically identical ethanol” could not be differentially treated under the applicable
strict scrutiny standard for facial discrimination against like products.\textsuperscript{36} This view, in a certain way, makes sense: the California ethanol used in California will produce when it is burned exactly the same greenhouse gas emissions in California as the Midwestern ethanol, and the Midwestern ethanol emissions will have the same marginal impact on global warming and on the effects of warming on California as the emissions from the California ethanol.

The question, though, is whether it is reasonable for California to consider the lifecycle emissions of ethanol used by Californians in California as an essential attribute of the ethanol, given that those lifecycle emissions are ultimately the but for result of actions by Californians purchasing and use decisions, and those lifecycle emissions will have an incremental effect on global warming and on the effects of global warming in California. We think the answer has to be yes, primarily because the two different kinds of ethanol are different products vis-a-vis California because they translate into different levels of greenhouse gas emissions and different anticipatable greenhouse gas emission impacts in California. It is, of course, true that there is no way of knowing that the greater emissions from any one product rather than another will affect global warming or affect the impacts of warming on California, as global warming is a global commons problem characterized by good deal of uncertainty. But Massachusetts v. EPA stands for the proposition that a state has a legitimate interest in global warming because it faces the possibility of adverse impacts in the state notwithstanding the global common and high uncertainty scientific characteristics of the global warming phenomenon.

Another way of making the same point is to build on the uncontroversial assumption, held, it seems, even by the challengers of the LCFS, that California can assign a different carbon weight to a fuel based on the greenhouse emissions generated by the fuel when it is burned in California. But if it is true that California can treat as unlike products two products that will produce different amounts of greenhouse gas emissions in California, then it seems only logical that California can treat as unlike two products that have different lifecycle emissions and thus have different implications for the risk to California of adverse climate change impacts. Indeed, including lifecycle emissions merely seems to be a more accurate,
more precise way for California to address possible adverse climate change impacts to California.

The fact that California faces possible adverse effects from global warming helps distinguish this case from others involving lifecycle-related environmental impacts associated with goods used or consumed within California. For example, imagine that wine produced in California involves less water pollution than wine production in Oregon or Washington or New York, and that California sought to impose a tax or extra cost on out-of-state wine based on the Clean Water impacts, the essentially localized impacts, of the wine production in those states. In that context, California would not be treated products as unlike based on their potential adverse environmental impacts in California, and thus any differential treatment of the wines would constitute facial discrimination subject to strict scrutiny.

As noted supra, this climate change lens on the Dormant Commerce Clause—the lens that treats products are not like when the products will have differential contributions to possible adverse environmental impacts from climate change within the State—appears to be endorsed by the Ninth Circuit in its opinion reversing the district court:

Unlike these discriminatory statutes, the Fuel Standard does not base its treatment on a fuel’s origin but on its carbon intensity. The Fuel Standard performs lifecycle analysis to measure the carbon intensity of all fuel pathways. When it is relevant to that measurement, the Fuel Standard considers location, but only to the extent that location affects the actual GHG emissions attributable to a default pathway. Under dormant Commerce Clause precedent, if an out-of-state ethanol pathway does impose higher costs on California by virtue of its greater GHG emissions, there is a nondiscriminatory reason for its higher carbon intensity value. See id. Stated another way, if producers of out-of-state ethanol actually cause more GHG emissions for each unit produced, because they use dirtier electricity or less efficient plants, CARB can base its regulatory treatment on these emissions. If California is to successfully promote low carbon-intensity fuels, countering a trend towards increased GHG output and rising world temperatures, it cannot ignore the real factors behind GHG emissions.

What is unclear is whether the Ninth Circuit panel’s embrace of this lens ultimately will hold, as the case continues to be litigated, and whether the Ninth Circuit’s perspective will gain support by other panels of that Court and by other courts. That issue is currently implicated by the lawsuit North Dakota has brought against Minnesota regarding Minnesota’s ban on the import of most energy from out-of-state new coal-fired plants. The Minnesota litigation raises different issues than the California litigation in many respects, one of which is that Minnesota is not seeking to treat in-state energy sources differently from out-of-state energy sources but rather is seeking to ban both new energy production from coal generation in Minnesota and long-term contracts for import of energy from new coal...
generation, and California is seeking to calibrate the environmental costs of carbon via a de facto tax or charge whereas Minnesota is using the blunter instrument of a ban on energy from certain forms of production and certain facilities. What makes the two lawsuits similar is that Minnesota’s premise in the legislation at issue—that its citizens have a legitimate stake in reducing GHG emissions attributable to them and thus have a right to enact policies to that end—is also California’s premise in the legislation at issue.  

B. Local Environmental Benefits

Different forms of energy production in a given state have different environmental consequences within such state. Coal-power electricity plants and wind farms, for example, have dramatically different local effects. Coal plants, especially older ones, generate a range of localized pollutants that have real environmental and public health consequences and, among other thing, may affect a State’s ability and costs of complying with the federal Clean Air Act. Wind farms, essentially, generate no pollution, and pose no adverse health risks. It is reasonable to assume that local clean energy will crowd out, displace, local “dirty” energy to at least some extent: where clean energy production is introduced into a state and meets a local demand previously met by dirtier energy, the dirty energy producer may continue to do business as before, by exporting energy it is currently providing to meet local demand, but it may well find that the demand for its energy has been reduced and that it will therefore need to reduce or even eliminate production. Thus, on net, the development of local energy predictably serves the goal of improving local environmental conditions by reducing the net pollution associated with local energy production. But why would the displacement of dirty local energy and corresponding environmental benefits be more secure when new in-state clean sources are established, and less secure when clean energy can be imported from


different sources under the RPS? For one thing, the same users who rely on dirty local production may want other local energy production as a replacement because, all else being equal, local sources may be more secure and reliable against interruption as well as possibly less expensive. Moreover, once new local renewable capacity has been established, it is a political reality that it is more likely to be permanent because the local renewable industry as a result will have a political voice and will advocate for the continuation of renewable energy requirements; the same political entrenchment effects is not achieved where renewable energy production is based out-of-state.\(^{39}\) While the displacement effects vary from state to state and case to case, and continue to be studied by scholars, it may well be reasonable for a State Legislature to assume that building local clean energy capacity will push the overall mix of in-state energy production away from the pollutant-intensive end of the spectrum and toward the pollutant-free end more reliably than allowing in-State users to meet renewable requirements solely through imported energy. To make the point another way, local clean energy is not a like product to out-of-state clean energy because the former results in a plausibly more reliable reduction in localized pollutants than the latter.

It is of course true that a State might seek to eliminate dirty local sources of energy in more direct ways by, for example, adding to state local environmental requirements such that the dirtier sources could no longer operate. But outside of the realm of strict scrutiny, a State need not establish that it is taking the only or a necessary means to achieve a legitimate state objective, such as reducing pollution and bringing the State into compliance with its State Implementation Plan under the Clean Air Act. When State legislation is not under strict scrutiny, a State has a broad range of choices under post-Lochner rational basis review as to how to achieve reducing local dirty energy, and thereby improve environmental quality and local health conditions. A court’s role is not to second-guess those particular choices. And if we accept the proposition that imported clean energy and local clean energy are not like products because they will have differing effects in terms of displacing dirty local

\(^{39}\) Entrenchment of a policy—here a policy favoring renewables as a part of the state energy mix—by one sitting legislature is an accepted commonplace, even if it does constitute a fundamental puzzle problem for democratic theory. See David A. Dana & Susan Koniak, *Bargaining For Democracy*, 148 U. Pa. L. Rev. 473, 531–32 (1999) (reviewing literature on entrenchment and democracy and the question when one legislature can effectively tie the hands of subsequent ones). For example, if one legislature votes to adopt pollution control measures that effectively force existing coal plants in the state to close, that in practice entrenches an anti- or no-coal position, as the next legislature cannot readily bring the coal plants back once they have closed even if it repeals the pollution control measures.
energy, then we are in the realm of non-strict scrutiny, in which case the State enjoys broad choice in terms of how to go about improving local environmental conditions.

C. Adaptation

Another benefit of viewing Dormant Commerce Clause cases through a climate change lens is that it brings into focus the climate vulnerabilities of cross-state energy transmission and the concomitant benefits of local production. Here, too, the state may have a legitimate interest in global warming—in this case an interest in its own climate resiliency and the vulnerability of its own population to power disruptions. To serve this interest, a state may reasonably conclude that it must foster more local energy production.

In July 2013, the U.S. Department of Energy published a report that outlined vulnerabilities in far-flung, cross-state energy transmission systems. For example, the report noted that “[i]ncreasing temperatures are expected to increase transmission losses, reduce current carrying capacity, increases stresses on the distribution system, and decrease substation efficiency and lifespan.”\(^{40}\) The report noted that transmission line capacity could decrease by 7%-8% under a 9 degree F warming scenario, and that system transmission losses during heat waves could be significant, like the 2006 heat wave that caused electric power transformers to fail in Missouri and New York or the July 2006 heat wave which caused more than 2,000 distribution line transformers in California to fail, causing a loss of power to approximately 1.3 million customers.\(^{41}\) In addition, since 2000, there has been a steady increase in damage to electric transmission and distribution lines from extreme storms, and “[a] Congressional Research Service report estimates that storm-related power outages cost the U.S. economy $20-$55 billion annually.”\(^{42}\)

While the report also highlights the vulnerabilities of renewable resources such as solar or wind power, the fact remains that for any given mix of energy production, local sources will always be more climate-resilient


\(^{41}\) Id. at 12–13.

\(^{42}\) Id. at 35.
than distant sources. In other words, states may have a legitimate interest in making themselves more climate resilient—indeed, for many states, adaptation measures will soon become of paramount importance—and a reasonable strategy to accomplish this could include fostering more local energy production. Local energy production not only reduces transmission vulnerabilities, but if local energy producers are generally smaller and more widely dispersed, they may also serve as a valuable bulwark against disproportionate climate shocks—weather events that strike certain areas harder than others. This is because, where energy production is centralized, a single weather event could compromise power to a large swath of population (as shown by the examples in the U.S. DOE report, cited supra). On the other hand, where energy production is dispersed, that single weather event would adversely affect a smaller percentage of overall power generation, and thus a smaller percentage of the population. In other words, states may have a “good and non-discriminatory reason,” in the words of the Ninth Circuit that is grounded in climate change adaptation, for favoring local production of energy.

III. SUPPORT FOR THE CLIMATE CHANGE LENS

A. WTO Jurisprudence

Judicial support for this evolving climate change lens comes in various forms. First, as noted supra, the Ninth Circuit has already looked beyond a product’s superficial “likeness” in deciding whether a state has discriminated based on a product’s location. But this decision comes against the backdrop of other evolving judicial views.

The World Trade Organization (WTO) enforces the international free-trade regime that is based on the same principles as the dormant Commerce Clause—preventing individual states from discriminating against products by virtue of where those products originate. The General Agreement on Tariffs and Trade (GATT), Article I provides, in pertinent part:

With respect to customs duties and charges of any kind imposed on or in connection with importation or exportation or imposed on the international transfer of payments for imports or exports, and with respect to the method of levying such duties and charges, and with respect to all rules and formalities in connection with importation and exportation... any advantage, favor, privilege or immunity granted by any contracting party to any product originating in or destined for any other country shall be accorded immediately and unconditionally to the like

43. A counter-argument would arise if distant sources were more climate resilient than local sources—if, say, Midwestern ethanol (or coal, for that matter) were more resilient to extreme weather than California ethanol—but given the transmission vulnerabilities, such a scenario seems unlikely.
product originating in or destined for the territories of all other contracting parties.\textsuperscript{44}

In other words, products originating in all countries are entitled to the most favorable treatment accorded to “like” products originating in any other nation. This principle is repeated in the GATT’s affirmative obligation known as national treatment on internal taxation and regulation under GATT Article III. Article III.4 requires that “[t]he products of the territory of any contracting party imported into the territory of any other contracting party shall be accorded treatment no less favourable than that accorded to like products of national origin in respect of all laws, regulations and requirements affecting their internal sale, offering for sale, purchase, transportation, distribution or use.”\textsuperscript{45}

What constitutes a “like” product has been a controversial issue under GATT for many years. Initially, GATT dispute settlement panels adopted a restrictive or “narrow” interpretation of like products, much like many domestic dormant Commerce Clause cases, in which products are “alike” if they have the same physical characteristics, regardless of the processes or production methods (PPM) by which they are made.\textsuperscript{46} The best-known example of this “narrow” view of likeness was espoused in United States—Restrictions on Importation of Tuna (Tuna/Dolphin I), in which Mexico challenged United States restrictions on tuna imports. The U.S. Marine Mammal Protection Act of 1972 set standards to limit dolphin mortality from tuna fishing and required tuna-importing countries to prove that they met the dolphin protection standards of U.S. law.\textsuperscript{47} In practice, this meant that the exporting country’s tuna fleet could not use purse seine nets. Such nets encircled dolphins known to swim with tuna and then captured everything inside them, killing large numbers of dolphins in the process.

The GATT dispute settlement panel struck down the United States’ tuna import restrictions.\textsuperscript{48} It agreed with Mexico that “regulations governing the taking of dolphins incidental to the taking of tuna could

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\textsuperscript{45} Id.
\textsuperscript{46} See DAVID HUNTER ET AL., INTERNATIONAL ENVIRONMENTAL LAW AND POLICY 1226 (4th ed. 2011).
\textsuperscript{48} Id. at 40. The decision was not formally adopted by the GATT parties, but its interpretation has been influential.
not possibly affect tuna as a product.” The panel focused on the product alone: tuna meat obtained through the use of purse seine nets was physically indistinguishable from tuna meat obtained through dolphin-safe fishing practices. The United States’ measure therefore discriminated between “like products” and was inconsistent with GATT.

However, much like the evolving dormant Commerce Clause jurisprudence, this idea of “likeness” as involving only the physical characteristics of the end product itself has undergone much change before the WTO. Several years after Tuna-Dolphin, the WTO’s Appellate Body rejected a purely “narrow” approach, holding that “[n]o one approach [to the question of ‘likeness’] will be appropriate for all cases” and that a judgment must be made “on a case-by-case basis.”49 The Appellate Body noted that the general criteria for assessing “likeness” can include many factors, such as “(i) the properties, nature and quality of the products; (ii) the end-uses of the products; (iii) consumers’ tastes and habits—more comprehensively termed consumers’ perceptions and behavior—in respect of the products; and (iv) the tariff classification of the products.”50 In other words, “likeness” is not simply a function of the product’s physical properties but can include other things.

Such “other things” can in turn include the health or environmental effects of how a product is made. For example, regulatory measures can be justified under Art. XX (b) of the GATT 1994, which reads:

Subject to the requirement that such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade, nothing in this Agreement shall be construed to prevent the adoption or enforcement by any contracting party of measures:

. . .

(b) necessary to protect human, animal or plant life or health;

This provision was analyzed in United States — Import Prohibition of Certain Shrimp and Shrimp Products.51 In that case, India, Malaysia, Pakistan, and Thailand alleged that certain trade-related provisions of the U.S. Endangered Species Act (“ESA”) were inconsistent with Arts. XI and XX of GATT. The ESA identified five species of endangered or threatened sea turtles in United States waters and prohibited their hunting, capture, or killing within the United States’ territorial seas and the high

50. Id.
seas. It required United States shrimp trawlers to use “turtle excluder devices” (TEDs) in their nets when fishing in waters known to be inhabited by the sea turtles. It also banned shrimp imports from countries that do not enforce comparable standards. The Appellate Body, cognizant of the criticism that the WTO was not meaningfully addressing the issue of environmental protection, rejected the “narrow” view of “likeness.” It ruled that the United States could regulate the production methods of domestic shrimp and shrimp imports. This was true even if the US was “conditioning access to [its] domestic market on whether exporting Members comply with, or adopt, a policy or policies [it] unilaterally prescribed.” Even under such circumstances, the US could take advantage of Art. XX(b).

In other words, the WTO has evolved to recognize that trade discrimination is not simply a matter of determining whether a “like” product is treated differently. There is also the question of whether the trade restriction is “necessary” to protect life or health. As the Appellate Body stated in the Korea-Beef case (a non-environmental case involving a claim of necessity under Article XX(d)):

>Determination of whether a measure . . . [may] be “necessary” within the contemplation of Article XX(d), involves in every case a process of weighing and balancing a series of factors which prominently include the contribution made by the compliance measure to the enforcement of the law or regulation at issue, the importance of the common interests or values protected by that law or regulation, and the accompanying impact of the law or regulation on imports or exports.

The Appellate Body then affirmed this interpretation in the context of Article XX(b), stating that:

...the more vital or important the common interests or values pursued, the easier it would be to accept as “necessary” measures designed to achieve those ends. In this case, the objective pursued by the measure is the preservation of human life and health through the elimination, or reduction, of the well-known, and life-threatening, health risks posed by asbestos fibres. The value pursued is both vital and important in the highest degree.

52. Id. ¶ 121.
53. Id.
The Appellate Body later affirmed that “[t]o be characterized as
necessary, a measure does not have to be indispensable.”\textsuperscript{56} Instead, it
must make a “material” contribution to the objective, and its contribution
“has to be weighed against its trade restrictiveness, taking into account the
importance of the interests or the values underlying the objective pursued
by it.”\textsuperscript{57} The Appellate Body will also look at whether reasonable
alternatives to the proposed trade restriction exist.\textsuperscript{58}

In sum, WTO jurisprudence has moved away from a simple analysis of
whether “like” products are treated differently, and now incorporates an
explicitly contextual, values-laden approach to determining whether or
not a trade restriction is inconsistent with GATT. It is precisely this sort
of evolution that we suggest for the dormant Commerce Clause—an
evolution that recognizes that the dormant Commerce Clause has never
been a static rule but has changed a great deal over time to respond to the
nation’s changing needs. A state’s response to climate change—arguably the
nation’s greatest challenge yet—should be evaluated with similar broader
goals in mind, and not simply be subject to an automatic and rather
mindless scrutiny of whether or not it discriminates against out-of-state
interests.

\textbf{B. The Supreme Court’s Recent United Haulers Decision}

One of the more recent and substantial changes to the Dormant
Commerce Clause doctrine occurred in the context of the Supreme
Court’s decision in \textit{United Haulers}.\textsuperscript{59} \textit{United Haulers} may or may not
represent a real step forward in the Supreme Court’s dormant commerce
jurisprudence, at least with respect to environmental issues. Ultimately,
we will need further Supreme Court case law to answer that question. At
a minimum, however, \textit{United Haulers} contains enough helpful language
that it opens the door for lower federal courts to push away from a reflexively
rigid interpretation of the Dormant Commerce Clause in instances in
which legislation appears to be genuinely motivated by environmental
concerns, rather than traditional protectionism.

\textit{United Haulers v. Oneida}, which was decided “independently of the
market participation precedents,” upheld a “flow control” ordinance
requiring trash haulers to deliver solid waste to a processing plant owned

\begin{footnotesize}
\textsuperscript{56} See Appellate Body Report, Brazil—Measures Affecting Imports of Retreaded
Tyres, ¶ 210, WT/DS332/AB/R (June 12, 2007).
\textsuperscript{57} Id.
\textsuperscript{58} See id. ¶ 210.
\textsuperscript{59} United Haulers Ass’n v. Oneida-Herkimer Solid Waste Mgmt. Auth., 550 U.S. 330
(2007).
\end{footnotesize}
and operated by a public authority in New York State. The Court found that compelling reasons justified “treating these laws differently from laws favoring particular private businesses over their competitors,” in particular “[u]nlike private enterprise, government is vested with the responsibility of protecting the health, safety, and welfare of its citizens” and can be presumed to be pursuing non-protectionist objectives, especially when it was addressing and purporting to satisfy a traditional government function. The Court also emphasized that where the costs of a regulation fall largely on in-state residents and entities, then deference to the political process is particularly appropriate: “the most palpable harm imposed by the ordinances at issue—more expensive trash removal—will likely fall upon the very people who voted for the laws,” rather than out-of-state interests. United Haulers thus set forth three interrelated, but perhaps independently valid, reasons for allowing what otherwise might be deemed a facially discriminatory regulation to pass muster under the Dormant Commerce Clause: first, the entity benefitting from the regulation is public or State-owned; the regulation concerns and purports to satisfy a traditional government function, specifically state or local function; and the burden, or a substantial part of it, of the regulatory scheme falls on in-state resident and entities who had resort and have resort to the state political process.

One year later, the Supreme Court decided Dept. of Revenue of Kentucky v Davis, which upheld a Kentucky law that exempted Kentucky-issued municipal bonds from Kentucky state tax while imposing that tax on all other bonds. In Davis, the Court acknowledged that Kentucky was a market participant as an issuer of local bonds but also was acting as a tax regulator of both Kentucky and non-Kentucky bonds, but the Court concluded the role of issuer and tax regulator were so intertwined that the expanded market participant exception of United Haulers applied. The Davis Court reiterated and endorsed all three ideas contained in the United Haulers decision—the importance of public ownership, the importance of traditional government function, and the importance of the costs being borne largely by in-state residents and entities.

60. Id.
61. Id.
62. Id. at 332.
63. Id. at 330–32.
65. Id. at 330.
Applying *Haulers* and *Davis* to the LCFS, it seems clear that if California or any other state actually purchases the power that is then re-sold to distributors and users within the State, the State can choose to favor low-carbon fuels in its purchasing and pricing decisions, even if that means locally-produced fuels are available to in-State users at prices lower than ones produced far away. The same would be true where a State purchases electricity and then prices and re-sells it according to a State-selected formula that includes a portion reserved for in-state-produced renewables. Some states, such as Illinois, in fact do have energy purchased and then re-sold by a public entity.

But what about the case where the role of the State is more multifaceted, as it was in *Davis*? As in *Davis*, where the State created a market for local bonds by issuing them in the context of a larger regional and national market, a State with a renewable portfolio standard creates a market for renewable power in the context of larger regional and national energy market. In both cases the State is central to the market, and if a State can and should be presumed to be acting for legitimate public purposes when it issues local bonds and then exempts them from tax, why shouldn’t the same presumption apply when a State establishes a renewable energy market and then allocates a share of that market to in-state production?

The other rationales of *United Haulers* and *Davis* seem applicable to the LCFS and RPS cases as well. Providing electricity and regulating rates arguably are traditional state government functions, albeit ones with a federal overlay. Moreover, protecting the State and its people from environmental harm from greenhouse gasses and conventional pollutants is absolutely within the domain of traditional public health and welfare, police power concerns. Finally, with both the LCFS and RPS, much of the costs of favoring low-carbon fuels and in-state-produced renewables are borne by in-state business and residential consumers, to the extent these requirements mean that they pay higher electricity costs than they otherwise would. Just as in *United Haulers* with respect to New Yorkers’

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66. *FERC v. Miss.*, 456 U.S. 742 (1982), which affirms the federal role in energy markets and federal constitutional power to have an extensive role, is not inconsistent with the idea that states have considerable traditional authority in this arena. Indeed, the very idea that States can have a Renewable Portfolio Standard at all, and that that fact by itself is assumed to be constitutionally and by and large politically unproblematic, confirms the widespread acceptance of a major state role. To my knowledge, in every State, retail rates are set by a State agency.

67. This, too, is uncontroversial. Indeed, under our system of cooperative federalism, even when there is an applicable federal statute, it is generally not read to preempt state authority and states, in practice, are often at the lead in addressing environmental problems under cooperative federalism.
waste disposal rates, it is Californians who pay the higher energy costs when the State of California uses lifecycle weightings for fuels.

IV. CONCLUSION

In sum, while the dormant Commerce Clause has the potential for undermining recent state efforts to reduce greenhouse gas emissions, courts should—and perhaps are—moving away from a rigid definition of discrimination against “like” products. This move would allow courts to conduct a more contextual analysis of state measures to encourage alternative fuel production through low carbon fuel standards or renewable energy portfolio standards.