

Nos. 12-15131 & 12-15135

**IN THE UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT**

ROCKY MOUNTAIN FARMERS UNION, *et al.*, *Plaintiffs-Appellees*,

v.

JAMES N. GOLDSTENE, in his official capacity as Executive Officer of the
California Air Resources Board, *et al.*, *Defendants-Appellants*,

ENVIRONMENTAL DEFENSE FUND, *et al.*,
Intervenors-Defendants-Appellants.

On Appeal from the United States District Court
for the Eastern District of California
Nos. 1:09-cv-2234 and 1:10-cv-163

**BRIEF OF AMICI CURIAE CHAMBER OF COMMERCE
OF THE UNITED STATES OF AMERICA
AND THE AMERICAN PETROLEUM INSTITUTE
IN SUPPORT OF PLAINTIFFS-APPELLEES**

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CORPORATE DISCLOSURE STATEMENT

Pursuant to Federal Rule of Appellate Procedure 26.1, Amici Curiae Chamber of Commerce of the United States of America and the American Petroleum Institute state that they have no parent corporations and no publicly held corporations own 10% or more of their stock.

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BRIEF OF THE CHAMBER OF COMMERCE
OF THE UNITED STATES OF AMERICA
AND THE AMERICAN PETROLEUM INSTITUTE
IN SUPPORT OF PLAINTIFFS-APPELLEES

INTEREST OF THE AMICI CURIAE¹

Founded in 1912, the Chamber of Commerce of the United States of America (“Chamber”) is the world’s largest business federation. The Chamber represents 300,000 direct members and indirectly represents an underlying membership of more than three million businesses and professional organizations of every size, in every industry sector, and from every region of the country. Its membership includes businesses across all segments of the transportation fuel industry. The Chamber also represents many other industry sectors that support, or depend upon, transportation fuels.

The American Petroleum Institute (“API”) is a nationwide non-profit trade association that represents over 500 members engaged in all aspects of the petroleum and natural gas industry, including exploration, production, refining, marketing, transportation, and distribution of petroleum products. The business activities of API’s members are frequently subject to regulation under

¹ All parties have consented to the filing of this brief. Fed. R. App. P. 29(a). Pursuant to Fed. R. App. P. 29(c)(5), amici hereby certify that this brief was authored solely by amici and their counsel listed on the cover, and that no person other than amici and their members contributed money that was intended to fund preparing or submitting this brief.

environmental statutes and regulations, such as the California law at issue here. API members participated in the rulemaking process for the California Low Carbon Fuel Standard (“LCFS”) regulation, Cal. Code Regs. tit. 17, §§ 95480-95490 (2012), that is the subject of this case.

An important function of the Chamber and API is representing their members’ interests in matters before Congress, the Executive Branch, and the courts. The Chamber and API regularly file *amicus curiae* briefs in cases that raise issues of vital concern to the Nation’s business community, including the petroleum and natural gas industries—such as cases involving challenges to state and federal environmental regulations. The Chamber’s and API’s members have a strong interest in the LCFS regulation, which has an immediate impact on the transportation fuel industry nationwide, and, as independent observers predict, could also have broader adverse effects on myriad upstream and downstream sectors and end users.

This case is important to the Chamber and API because the LCFS will impede the free flow of transportation fuels in interstate commerce and thus hinder the operation of the Nation’s integrated market. The LCFS not only discriminates against out-of-state fuels in favor of in-state fuels, but also attempts to export California’s local policy preferences about means of production, methods of transportation, and land use throughout the United States and abroad. Upholding

the LCFS will encourage other States to enact their own potentially inconsistent regulations. Such fragmentation of the interstate market for transportation fuel will create significant inefficiencies and, as experts predict, could impose billions of dollars of costs on industry and consumers, which is of profound concern to the Chamber, API, and their members.

STATEMENT OF THE ISSUES

(1) Whether the LCFS, through which California seeks to regulate commercial activity wholly outside of its borders, and which raises the prospect of a patchwork of overlapping and inconsistent state-by-state regulations, violates the Commerce Clause of the U.S. Constitution?

(2) Whether the LCFS can satisfy constitutional scrutiny under the Commerce Clause, given that the program's foreseeable costs dwarf its putative local benefits, and its means are a poor fit to California's stated ends?

SUMMARY OF ARGUMENT

The LCFS is unconstitutional *per se* because it seeks to regulate conduct that occurs wholly outside California. The Commerce Clause has long been understood to prohibit a State from enacting a law that in *practical effect* regulates extraterritorially. The LCFS's extraterritorial overreach is particularly problematic because a dozen other States have already begun developing their own specific, and likely inconsistent, carbon fuel standards. Those other nascent regulations

underscore that upholding California's LCFS will fragment the transportation fuel market, and, as the studies discussed below predict, could impose costs and inefficiencies not only on the fuel industry, but also on a long chain of upstream and downstream sectors nationwide.

Even if the LCFS is not unconstitutional per se, it cannot satisfy either the strict scrutiny that applies to regulations (like this one) that facially discriminate against out-of-state goods, or the balancing test that applies to facially neutral regulations under *Pike v. Bruce Church, Inc.*, 397 U.S. 137, 142 (1970). California made fundamental analytical errors that led it to overstate the LCFS's feasibility, and to understate its costs and adverse effects on commerce. Accordingly, the LCFS is not narrowly tailored to California's stated ends.

ARGUMENT

Congress' authority "[t]o regulate Commerce . . . among the several states," U.S. Const. Art. I, § 8, cl. 3, has long been understood to encompass "an implicit or 'dormant' limitation" that not only "denies the States the power unjustifiably to discriminate against or burden the interstate flow of articles of commerce," but also flatly prohibits "state legislation regulating commerce that takes place wholly outside of the state's borders." *Healy v. Beer Inst.*, 491 U.S. 324, 326 n.1 (1989); *Oregon Waste Sys., Inc. v. Dep't of Env'tl. Quality*, 511 U.S. 93 (1994); *Pac. Merch. Shipping Ass'n v. Goldstene*, 639 F.3d 1154 (9th Cir. 2011) ("PMSA").

These protections are essential to the “single, national market,” *United States v. Lopez*, 514 U.S. 549, 568 (1995) (Kennedy, J., concurring), that is an important source of this Nation’s economic and industrial strength.

By seeking to “assume[] legal and political responsibility for emissions of carbon resulting from the production and transport, regardless of location, of transportation fuels” used in California, E.R. 1:65,² the LCFS violates several Commerce Clause principles. The District Court correctly held that the LCFS: (a) discriminates against interstate commerce in ethanol, favoring in-state fuels over out-of-state ones; (b) impermissibly regulates decisions and commercial activity that occur wholly outside California; and (c) purposefully discriminates against out-of-state crude oil in favor of in-state crude. Appellees persuasively explain why the District Court’s judgment on each point is correct, and the Chamber and API do not replicate that analysis here.

Rather, this brief advances two specific arguments that reflect the Chamber’s and API’s perspectives as representatives of businesses nationwide that are engaged in interstate commerce and that rely on unfettered access to an integrated national market. In doing so, this brief draws on third-party empirical evidence that California has underestimated the LCFS’s costs and adverse effects on

² Citations to Appellants’ Excerpts of Record are to volume and page number.

interstate commerce and overstated its likely feasibility, and that the regulation is a poor means to serve California's stated ends. *First*, the LCFS unconstitutionally seeks to regulate commerce that occurs wholly outside California, and upholding this law will fragment the interstate market in transportation fuels. *Second*, and relatedly, the LCFS cannot satisfy any level of constitutional scrutiny under the Commerce Clause because it is poorly tailored to California's stated ends, and because the program's costs vastly outweigh its expected benefits.

I. The LCFS Unconstitutionally Regulates Conduct Wholly Outside California, Threatening To Fragment the Interstate Market in Transportation Fuels.

A. The LCFS Impermissibly Regulates Commerce Outside California.

The Commerce Clause's prohibition on state legislation "regulating commerce occurring wholly outside [a] State's borders" applies not only where provisions explicitly regulate extraterritorial conduct, but also where "the *practical effect* of the regulation is to control conduct beyond the boundaries of the State." *Healy*, 491 U.S. at 332, 336 (emphasis added); *see also Brown-Forman Distillers Corp. v. New York State Liquor Auth.*, 476 U.S. 573, 583 (1986). Courts must also guard against the risk that "other states *may adopt* similar extraterritorial schemes and thereby impose inconsistent obligations." *PMSA*, 639 F.3d at 1178 (emphasis added; citing *Healy*, 491 U.S. at 336-37). Accordingly, California's protestations

of non-extraterritorial intent (e.g., CARB Br. 74) are both questionable (e.g., E.R. 1:65) and irrelevant.

In both design and “practical effect,” California’s LCFS regulates conduct “wholly outside [of California’s] boundaries.” *Healy*, 491 U.S. at 336. The LCFS requires regulated entities either to conform the average carbon intensity (“CI”) of the fuels they sell in California to a declining annual target, or to redeem banked or purchased credits to satisfy a shortfall. Cal. Code Regs. tit. 17, §§ 95482, 95484(b), 95485 (2012). The CI values California assigns to particular fuels thus affect the ability of a party to import or sell them. *Id.* § 95484(b). California explains that it assigns a higher CI based on “GHG emissions associated with [a] fuel’s production, transport, storage, and use.” E.R. 7:1717. Among other things, the LCFS calculates CI based on:

[f]arming practices (e.g., frequency and type of fertilizer used); [c]rop yields; [h]arvesting practices; [c]ollection and transportation of the crop; [t]ype of fuel production process . . . ; [f]uel used in the production process (Coal/Natural Gas/Biomass); [e]nergy efficiency of the production process; [and] [t]he value of co-products generated (e.g. distillers grain)

1 Proposed Regulation to Implement the Low Carbon Fuel Standard: Initial Statement of Reasons at IV-4 to IV-5 (Mar. 5, 2009) (“ISOR”); E.R. 9:2282-83.³

³ *See also* Br. for Oregon et al. as Amici Curiae in Support of Appellants 9 (LCFS calculates CI based on “the agricultural methods applied to produce the feedstock,” whether that activity takes place “in California or Nebraska—or, for that matter, Brazil.”).

Notwithstanding the Constitution's prohibition on regulating commerce "wholly outside [a] State's borders," *Healy*, 491 U.S. at 332, on its face the LCFS seeks to regulate the means of production of ethanol consumed in California but produced outside that State, based on conduct that often occurs wholly outside the State's boundaries. *See* CARB Br. 74. For instance, the LCFS assigns a higher CI if an ethanol producer in the Midwest chooses to dry distiller's grains (a co-product) rather than leaving them wet. *See* Cal. Code Regs. tit. 17, § 95486(b) (2012) (Table 6) (specifying CIs of 93.60 gCO₂e/MJ and 86.80 gCO₂e/MJ for Midwest dry milling with dry and wet distiller's grains, respectively). Similarly, the LCFS increases CI for wet instead of dry milling, a preliminary step in the conversion of corn to ethanol. California Air Resources Board ("CARB"), *Detailed California-Modified GREET Pathway for Corn Ethanol* at 44-45 (Feb. 27, 2009) (assigning CI of 38.3 gCO₂e/MJ for dry mill and 48.78 for wet mill). And the LCFS "adjusts" CI values for emissions California attributes to "[i]ndirect land use change," not only "domestically" but also in "countries that trade with the U.S." *See* E.R. 9:2279 (ISOR at IV-1); *see also* E.R. 9:2305-11 (ISOR at IV-27 to IV-33) (increasing CI for land-use changes in Brazil). California imposes these penalties despite the fact that the conduct in question has no effect on the chemical composition of ethanol actually consumed in California.⁴

⁴ The LCFS therefore seeks to reach conduct outside California in the same

The inevitable “practical effect,” *Brown-Forman*, 476 U.S. at 583, of increasing a product’s CI based on out-of-state means of production or land use is to make ethanol produced by those pathways less commercially valuable as compared to (chemically identical) fuel produced in a manner favored by California. E.R. 2:131 at ¶¶ 6-8; *see also* Br. of Rocky Mountain Farmers Union Appellees at 34-35 (“RMFU Br.”) (noting 1-2 cents/gallon price premium for certain lower-CI ethanol). The CI penalty attributed to indirect land use change is significant by any relevant metric, increasing CI for Midwest average ethanol from 69.40 to 99.40 (a 43% penalty), and for Midwest Wet Mill ethanol (produced with energy inputs exclusively from coal) from 90.99 to 120.99 (a 33% penalty). Cal. Code Regs. tit. 17, § 95486(b) (Table 6). The LCFS thus penalizes and discourages those extraterritorial decisions, seeking to “project[] [California’s] regulatory regime into the jurisdiction of another State.” *Healy*, 491 U.S. at 337. Indeed, the principal reason for—and main effect of—imposing burdens on the marketability of certain ethanol is to give its producers an economic incentive to manufacture in a way to reduce its CI score.

CARB does not dispute that the LCFS is predicated on extraterritorial considerations, but insists that the regulation does not “directly contro[l]”

way as a law “requiring automobiles driving from Arizona to switch to certain kinds of fuel . . . miles from the California border,” which this Court took pains to distinguish while upholding the maritime regulations in *PMSA*. 639 F.3d at 1180.

commerce, involves only “incentives,” and thus has permissible “incidental” or “indirect effects.” CARB Br. 69-70.⁵ But courts have struck down analogous state laws under the Dormant Commerce Clause without suggesting they could be saved by re-characterizing mandates as “incentives.” *See, e.g., Brown-Forman*, 476 U.S. at 575-76 (striking down New York law that gave distillers an incentive to charge New York residents the lowest possible prices, in exchange for the right to do business in that State); *Nat’l Solid Wastes Mgmt. Ass’n v. Meyer*, 63 F.3d 652 (7th Cir. 1995) (similar, as to recycling laws and access to Wisconsin landfills); *Nat’l Foreign Trade Council v. Natsios*, 181 F.3d 38, 68-70 (1st Cir. 1999) (striking down law that gave businesses an effective ten percent bid-price incentive not to do business in Burma).

The LCFS is permissible, CARB also asserts, because “[r]egulated parties *choose* how to comply”—presumably, CARB means, by selecting a mix of fuels or purchasing credits. CARB Br. 74. But that “choice” is heavily dependent on the availability of credits. Many predict the LCFS credit market will face significant cumulative shortages within only a few years. *See, e.g., Boston Consulting Group, Understanding the impact of AB 32* at 9-10 (June 19, 2012), *available at*

⁵ This argument relies on a doctrinal distinction (between “direct” and “indirect” effects) that has been rightly criticized as unworkable and has fallen into disfavor in recent decades. *See* 1 Laurence H. Tribe, *American Constitutional Law* § 6-5 (3d ed. 2000); *Wickard v. Filburn*, 317 U.S. 111, 125 (1942).

http://www.secureourfuels.org/wp-content/uploads/2012/07/BCG_report.pdf; Jim Lyons & Allan Daly, Sierra Research, *Preliminary Review of the ARB Staff Analysis of ‘Illustrative’ Low Carbon Fuel Standard Compliance Scenarios (DRAFT)*, available at http://www.wspa.org/uploads/documents/Publications/DRAFT_LCFS_Review_12.12.11.pdf (“Sierra Research Study”).

The Sierra Research Study predicts cumulative credit deficits for gasoline and substitutes of up to 4.37 million metric tons by 2015, and 49.4 million metric tons by 2020. *Id.* at 8.⁶ If credits are not available for purchase (or are not economically priced), the LCFS could force regulated entities either to comply with the annual target without credits or withdraw from California’s market. In particular, observers explain, the processes that generate credits (e.g., producing more low-CI fuels or selling more flex-fuels) face “significant barriers and inherent delays,” such as the need for capital investment in expanded production capacity and infrastructure, the pace of technological innovation, and slow turnover of

⁶ CARB’s compliance model relies on credits generated in early years to offset later deficits when the annual reduction targets accelerate. But CARB reports only 450,000 metric tons of credits generated cumulatively in the first three quarters of 2011—one of the key credit-producing years. *See* CARB, *Low Carbon Fuel Standard 2011 Program Review Report* 14 (Dec. 8, 2011) (“CARB Program Report”), available at <http://www.arb.ca.gov/fuels/lcfs/lcfs.htm>. Even CARB’s most optimistic parameters predict a peak *cumulative* credit surplus (i.e., before deficits begin to draw it down) of 3.2 million metric tons. *Id.* at 101.

existing vehicle fleets. See Stonebridge Associates, Inc., *The Impact of the Low Carbon Fuel Standard and Cap and Trade Programs on California Retail Diesel Prices* 47 (Apr. 25, 2012), available at <http://www.caltrux.org/sites/default/files/CTALCFS.pdf> (“Trucking Report”); see also *infra* at p. 26. These reports predict the supply of credits “will not promptly respond to higher credit prices.” Trucking Report at 47. Nor does the LCFS place any upper limit on the price of credits, making the market “a prime target for speculators who would amass credits on the basis of their expectations regarding infeasibility of the LCFS.” *Id.*

Simple mathematics constrains a producer’s ability to comply with the annual targets if credits are unavailable. As leading energy analysts explain, for an entity seeking to reduce its average CI by ten percent by substituting some ethanol for gasoline, “even a total replacement of gasoline-pool fuel with corn ethanol might not achieve compliance” because ethanol CI varies from ten percent below, to significantly higher than, gasoline CI. See IHS CERA, *Oil Sands, Greenhouse Gases, and US Oil Supply: Getting the Numbers Right* at 24 (2010), available at http://www.api.org/aboutoilgas/oilsands/upload/CERA_Oil_Sands_GHGs_US_Oil_Supply.pdf (“*Oil Sands*”); see also Cal. Code Regs. tit. 17, § 95486(b) (Table 6) (specifying CI of 120.99 for Midwest wet-mill ethanol from corn and CI of 95.86 for California gasoline blendstock).

Other States and certain foreign entities have candidly expressed concerns about the LCFS's extraterritorial reach in their pleadings before this Court. Seven U.S. States filed an amicus brief explaining how California's LCFS seeks to regulate decisions about "cultivation and other economic activity" that take place "hundreds or thousands of miles" away. *See* Br. of Amici Curiae Nebraska et al. in Opposition to Appellant's Motion for a Stay 5. And during California's regulatory process, the Brazilian Sugarcane Industry Association ("UNICA") urged the State to "avoid penalizing those players [in Brazil] who have made investments in more efficient and sustainable methods of production," and recommended that CARB adjust its regulations "to better represent the complex dynamics of the Brazilian agriculture" and to use "specific, credible values for Brazilian ecosystems." *See* Comment Letters from Joel W. Velasco, UNICA North America at 1 (Aug. 19, 2009) & 24 (Apr. 16, 2009).⁷

B. California's LCFS Will Overlap and Conflict With Other States' Regulations, Fragmenting the Market for Transportation Fuels.

The extraterritoriality inquiry also examines "how [a] challenged [regulation] may interact with the legitimate regulatory regimes of other States and what effect would arise if not one, but many or every, State adopted similar

⁷ That UNICA now supports the LCFS because California assigned Brazilian sugarcane a "low carbon intensity relative to most corn ethanol," *see* Br. for Amicus Curiae Brazilian Sugarcane Industry Association ("UNICA Br.") at 5, does not lessen the LCFS's extraterritorial effect. Regulated entities may welcome rules that favor them compared to an unregulated status quo.

[rules].” *Healy*, 491 U.S. at 336. This Court is not limited to reviewing laws currently in effect, but must account for the “*possibility* that other states *may adopt* similar extraterritorial schemes and thereby impose inconsistent obligations.” *PMSA*, 639 F.3d at 1178 (emphasis added); *see also Union Pacific R.R. Co. v. Cal. Pub. Utils. Comm’n*, 346 F.3d 851, 872 n.22 (9th Cir. 2003) (striking down state rule before standards were issued, where “it [wa]s clear that any [such] standard . . . would impermissibly burden interstate commerce”).

The prospect of inconsistent LCFS laws is “far from speculative,” *S.D. Myers, Inc. v. City and County of San Francisco*, 253 F.3d 461, 470 (9th Cir. 2001), because parallel regulations are already underway in the dozen other States discussed below. “North American jurisdictions implementing or considering LCFS policies represent 34 percent of the U.S. gasoline market and close to 50 percent of the Canadian gasoline market.” *Oil Sands*, Summary of Key Insights.⁸

1. Twelve Other U.S. States Are Developing LCFS.

In May 2009, the Governor of Washington directed the Washington Department of Ecology (“WDE”) to “assess whether . . . California’s [LCFS]; standards developed or proposed in other states, provinces, or for the nation; or modified standards or alternative requirements to reduce carbon in transportation fuels would best meet Washington’s greenhouse gas emissions reduction targets.”

⁸ British Columbia has enacted a similar LCFS standard calling for a ten percent decrease in CI by 2020. B.C. Reg. 394/2008 (Can.).

Wash. Exec. Order 09-05. In February 2011, the WDE published a range of scenarios to tailor existing LCFS laws to Washington's circumstances. *See* Wash. Dep't of Ecology, *A Low Carbon Fuel Standard in Washington: Informing the Decision* (Feb. 18, 2011) ("WDE Report"), available at http://www.ecy.wa.gov/climatechange/docs/fuelstandards_finalreport_02182011.pdf. The WDE Report focuses on specific "feedstocks for alternative fuel production" available in Washington, including agricultural cultivation, waste-derived materials, and hydroelectric power. The Report notes Washington's unique access to hydro power, and specifically "modifies" analytical inputs "to reflect Washington state conditions," including the kinds of crude oil refined and used in Washington. *Id.* at 3-8, 9-13, 32.

The Oregon Legislature has also authorized a LCFS. *See* 2009 Or. Laws Ch. 754 § 6 (H.B. 2186). In January 2011, the Oregon Department of Environmental Quality ("ODEQ") published an extensive technical and economic analysis and proposed program design. *See* Or. Dep't of Env'tl. Quality, *Oregon Low Carbon Fuel Standards* (Jan. 25, 2011) ("ODEQ Report"), available at <http://www.deq.state.or.us/aq/committees/docs/lcfs/reportFinal.pdf>. ODEQ "used California's program as a starting point," but then "customized the design to reflect Oregon's values and priorities, specifically features that protect consumers and provide flexibility to regulated fuel importers and suppliers." ODEQ, *Oregon*

Clean Fuels Program Q&A, <http://www.deq.state.or.us/aq/cleanFuel/qa.htm> (last visited June 1, 2012).

Ten Northeast and mid-Atlantic States committed to finalize a “proposed program framework” in early 2011 for a “regional low carbon fuel program.” See *Northeast and Mid-Atlantic Low Carbon Fuel Standard, Memorandum of Understanding* (Dec. 30, 2009) (signed by Governors of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey,⁹ New York, Pennsylvania, Rhode Island, and Vermont), *available at* <http://www.nescaum.org/documents/lcfs-mou-govs-final.pdf>. In August 2011, Northeast States for Coordinated Air Use Management (“NESCAUM”) published a draft plan and economic analysis assessing reductions of 5-15% over a period of 5-15 years. See NESCAUM, *Economic Analysis of a Program to Promote Clean Transportation Fuels in the Northeast/Mid-Atlantic Region* (Aug. 2011), available at <http://www.nescaum.org/activities/major-reports>. NESCAUM did not simply reproduce California’s LCFS, but instead drew on other data from EPA, DOE’s GREET model, a private consulting firm, the northeast/mid-Atlantic electricity

⁹ Governor Chris Christie subsequently withdrew New Jersey from the agreement.

grid, and the VISION-Northeast model from Argonne National Laboratory in customizing a regional program. *See id.* at 5-7.¹⁰

2. *Differences in State-Specific LCFS Will Have Adverse Effects on Interstate Commerce.*

Inevitable inconsistencies between state programs will lead to the kind of “patch-work regulatory scheme” that destroys the “substantial uniformity” necessary to a smoothly-functioning single market. *Union Pacific*, 346 F.3d at 871. “[I]f California can [establish a LCFS] so can every other state, and there is no guarantee that the standards will be similar.” *Id.*

For instance, the rules appear to take opposite approaches to indirect land use change. California assigns an indirect land-use penalty to ethanol from corn and sugarcane, but Oregon’s proposed law excludes a similar adjustment. *See* ODEQ Report at 21 (noting that land-use-change “calculation methodologies” are “still in development,” and that the field is “nascent”). In its rulemaking process,

¹⁰ These LCFS programs are only a subset of general efforts by States to regulate greenhouse gas emissions outside their borders. Minnesota’s Next Generation Energy Act of 2007, Minn. Stat. §§ 216H.01 et seq., prohibits “import[ing] [into Minnesota] or commit[ing] to import from outside the state power from a new large energy facility that would contribute to statewide power sector carbon dioxide emissions,” defined to include emissions from the generation of electricity imported from outside, but consumed within, Minnesota. *Id.* § 216H.03, subd. 2-3. North Dakota (which transmits to Minnesota power from coal-fired plants) and industry groups recently challenged the law under the dormant Commerce Clause. *See* Amended Complaint, *North Dakota v. Swanson*, No. 11-cv-3232 (D. Minn. Nov. 2, 2011) (Doc. 9). A judgment upholding California’s LCFS would doubtless be invoked to defend Minnesota’s law.

Oregon specifically rejected an “[a]lternative” proposal to use “[CARB’s] . . . indirect land use change values.” *Id.*

Multiple LCFS regulations may also impose overlapping and potentially inconsistent informational requirements. A LCFS depends on extensive record-keeping to realize the benefits (or record the costs) of low- (high-) carbon fuels in terms of credits earned or needed. The logistical burden could be significant, particularly if existing infrastructure and systems were not developed with recordkeeping in mind. *See* Jack Richards, CRA International, *Change is in the Air: Implications of low carbon fuel standards for refiners and fuel distributors 3* (Feb. 2009) (“Richards”), *available at* <http://www.crai.com/uploadedFiles/Publications/implications-of-low-carbon-fuel-standards.pdf>. Credit accounting and trading programs add an additional layer of complexity that again may vary among States. *Id.*

Different States also assign different CI values to chemically identical fuels. One report, for instance, contemplates CI values for conventional biodiesel fuels ranging from 40.0 to 70.0 gCO₂e/MJ, compared to California’s 83.25 figure. *Compare* Consumer Energy Alliance, *Analysis of the Economic Impact of a Regional Low Carbon Fuel Standard on Northeast/Mid-Atlantic States 20* (Mar. 2012) (“CEA Report”), *available at* <http://consumerenergyalliance.org/wp/wp-content/uploads/2012/03/The-Economic-Impact-of-a-Regional-Low-Carbon-Fuel->

Standard-on-Northeast-Mid-Atlantic-States.pdf, *with* Cal. Code Regs. tit.17, § 95486 (Tables 6 & 7). And Oregon assigns ethanol from corn (Midwest average) a CI of 64.82 (6.6% less than California’s CI of 69.40), and electricity a CI of 37.80 (64-69% less than California’s range of 58.40-73.40, depending on the pathway). Similarly, conventional biodiesel produced via a single “pathway” might be assigned a CI value of 83.25 in California, 19.99 in Oregon, and 40.0 in the Northeast and mid-Atlantic. *Compare* Cal. Code Regs. tit. 17, § 95486 (Table 7), *with* CEA Report at 20 (Table 2-3), *and* ODEQ Report at 79.

To the extent the same fuels are assigned a lower CI in one State (e.g., Oregon) than another (e.g., California), experts explain that using that fuel to achieve a given reduction will be more onerous in the latter jurisdiction than the former—as “[t]he closer the GHG emissions of the low carbon fuel are to the [baseline] standard, the more of that fuel must be supplied of the total amount of fuel in the marketplace” to achieve a given reduction. Michael Canes & Edward Murphy, George C. Marshall Institute, *Economics of a National Low Carbon Fuel Standard* at 10 (2009), *available at* <http://www.marshall.org/pdf/materials/642.pdf>. For providers that serve multiple States, the fact that one State “defin[es] [the regulation’s operative criterion] differently from other States,” and the practical difficulty of maintaining multiple parallel distribution systems tailored to specific

sub-markets, demonstrates “[t]he ease with which [the LCFS] can interfere with [producers’] operations in other States.” *Brown-Forman*, 476 U.S. at 583.

Further, Oregon and California have different eligibility thresholds for seeking an individualized CI pathway. *Compare* ODEQ Report at 24 (must show lesser of 5.0 g CO₂e/MJ or 10 percent CI reduction from published values, together with minimum annual sale of 1 million gasoline gallon equivalents), *with* Cal. Code Regs. § 95486(e)(2) (requiring 5.0 g CO₂e/MJ reduction without 10 percent option, together with minimum sale of 10 million gasoline gallon equivalents). Thus, a regulated entity might be eligible to seek an individual pathway in Oregon but not California, heightening the chance of conflicting CI values.

CARB nonetheless finds it “difficult to imagine” conflicts, foreseeing only “an increase in the range of ethanol prices.” CARB Br. 82. That argument appears to assume that regulated entities can comply with the LCFS by purchasing credits rather than complying with the annual targets. As discussed above, *supra* at pp. 10-12, however, that assumption is untenable. One analyst predicts that adjusting offerings from State to State will create inefficiencies and practical obstacles, and could require modifying supply and distribution capabilities to serve state “mini-markets.” *See* Richards at 2.

Independent, third-party sources predict that this regulatory patchwork will “transform what was once one large transportation fuel market into a discontinuous

series of ‘mini-markets.’” *Id.* According to such studies, “[t]ight supplies” in individual mini-markets will increase price volatility as distributors manage inventory levels saleable in various sub-markets, akin to the gasoline price swings experienced after Hurricane Katrina in 2005. *Id.*; *see also* Matthew Chesnes, Department of Economics, University of Maryland, *Capacity and Utilization Choice in the US Oil Refining Industry* (Mar. 2009), available at <http://www.chesnes.com/docs/oil.pdf> (price shocks from disruptions to refining capacity after Hurricane Katrina raised gasoline prices by almost 16%).

Nor can producers plan to mitigate inefficiencies by complying across the board with the strictest standard, as there is no assurance rules will be compatible. That approach also highlights the LCFS’s extraterritorial nature. Indeed, CARB itself predicts that “many producers will want to make their fuels more competitive in California by producing the lowest CI fuels possible” and then will “s[ell] [those low-CI fuels] outside of California.” E.R. 4:785. CARB touts the LCFS as a “model program” that will be “copied to other entities,” and cites California’s “environmental leadership” not only “in much of the nation” but also abroad. E.R. 4:786; *see also* Br. of Amicus Curiae Truman National Security Institute et al. in Support of Defendants-Appellants at 31-32 (noting that “other states often emulate” California and citing CARB’s expectation that the LCFS will “hasten the

development of similar programs by other states”). It is not difficult to foresee state-specific LCFS proliferating if California’s is upheld.

Even if these disparate state programs could be harmonized, the existence of multiple regulations is likely to increase demand for the same low carbon fuel supplies. Observers predict that the supply-demand balance for these fuels could fluctuate and be subject to price volatility if, as discussed further below, there are not sufficient quantities to prevent market shortages. *See, e.g.*, Richards at 3.

II. California Has Dramatically Underestimated the LCFS’s Cost and Adverse Effects on Interstate Commerce, and Overestimated Its Feasibility and Benefits.

If this Court concludes that the LCFS is not invalid per se, it must consider whether the LCFS can survive the strict scrutiny that applies to facially discriminatory rules, and perhaps, if it declines to remand, also the prohibition on evenhanded regulations whose burden on interstate commerce is “clearly excessive in relation to the putative local benefits.” *Conservation Force, Inc. v. Manning*, 301 F.3d 985, 995 (9th Cir. 2002) (quoting *Pike*, 397 U.S. at 142); RMFU Br. 123.¹¹ Under *Pike*, “[i]f a legitimate local purpose is found, then the question becomes one of degree,” with “the extent of the burden that will be tolerated . . . depend[ing] on the nature of the local interest involved, and on

¹¹ The District Court did not reach the *Pike* analysis. E.R. 1:48 n.2.

whether it could be promoted as well with a lesser impact on interstate activities.”
397 U.S. at 142.

In conducting either inquiry, the Court should take account of California’s serious analytical errors in estimating the program’s aggregate cost, adverse effects on interstate commerce, feasibility, and expected benefits. *See, e.g., Conservation Force*, 301 F.3d at 997-99 (concluding that factual evidence about low nonresident use of Arizona natural resources undercut State’s asserted justifications for cap on nonresident hunters); *Nat’l Ass’n of Optometrists & Opticians v. Harris*, 682 F.3d 1144, 1150 (9th Cir. 2012) (*Pike* inquiry focuses on plaintiffs’ “evidence” of burden on interstate commerce). A proper consideration of those factors demonstrates that the LCFS is not appropriately tailored to California’s stated goals.

A. The LCFS Is Predicated on Numerous Faulty Assumptions That Underestimate Its Costs and Burden on Interstate Commerce, and Overstate Its Feasibility and Benefits.

1. *California’s Feasibility Assumptions Were Flawed.*

California’s estimates of feasibility and cost relied on identifying potential compliance pathways, but those estimates are rife with error. For one such pathway, CARB staff estimated that 2.73 billion gallons of low-carbon Brazilian sugarcane ethanol would be available in California by 2020. *See* CARB Program Report at 174. But the Brazilian Government forecasts only 500 million gallons of

sugarcane ethanol will be available for the *entire* U.S. market by 2020. Sierra Research at 4.¹² Moreover, according to the U.S. Energy Information Administration, fewer than 2 billion gallons of ethanol from any source (i.e., sugarcane, corn, or otherwise) will be imported into the United States by 2020. Even if enough sugarcane ethanol were available to meet LCFS-induced demand, its price would likely be “twice the cost of gasoline blendstocks,” a significant penalty at the pump. *Id.*

Another of CARB’s pathways assumes 2.35 billion gallons of cellulosic biofuel could be available to support LCFS compliance. CARB Program Report at 174. But the U.S. Energy Information Administration predicts at most 2 billion gallons of cellulosic biofuel for the *entire United States* by 2020; CARB therefore assumes that California could and would consume essentially all U.S. production, and then some. *See* Sierra Research at 5. U.S. government sources suggest that such heavy reliance on cellulosic biofuels is unlikely given their limited current availability; the U.S. Environmental Protection Agency (“U.S. EPA”) recently reduced the 2012 federal cellulosic ethanol target to 8.65 *million* gallons nationwide. *See* U.S. EPA, Regulation of Fuels and Fuel Additives: 2012

¹² UNICA’s brief further reports that UNICA members are responsible for “more than 50% of all ethanol produced in Brazil,” and exported only 228,868 gallons of sugarcane ethanol to the United States in 2011, less than one ten-thousandth of CARB’s aspiration for 2020. UNICA Br. at 1.

Renewable Fuel Standards, 77 Fed. Reg. 1320, 1323 (Jan. 9, 2012). And the California Energy Commission predicts that cellulosic ethanol will cost 2.75 times the price of gasoline feedstocks. Sierra Research at 5.

CARB's calculations also assume that 4.6 million flexible fuel vehicles could be available in California by 2020. CARB Program Report at 175. But other studies explain that only 400,000 flexible fuel vehicles are currently in use in California, there is no evidence demand has increased since the LCFS was announced, and federal incentives (i.e., Corporate Average Fuel Economy credits) to build such vehicles will phase out beginning in 2015. *See* Sierra Research at 5-6. An overriding factor in assessing the cost and feasibility of a low-carbon fuel standard is "the sheer dominance of gasoline-fueled vehicles/fuel supply infrastructure and the practical time that it takes to adjust and replace the demand for gasoline." CEA Report at 4. Even the California Energy Commission predicts only 1.75 million flexible fuel vehicles by 2020—*less than half* the number assumed by CARB. Sierra Research at 5.

CARB also ignores independent reports explaining that California lacks sufficient retail infrastructure to dispense the three billion gallons of the 85% ethanol fuel such vehicles would require—infrastructure the California Energy Commission estimates could cost as little as \$3 billion and as much as \$102 billion to construct, depending on the volume of fuel sold by a typical dispenser and the

costs of installation at existing retail stations. *Id.* at 6; Cal. Energy Comm’n, *Transportation Energy Forecasts and Analyses for the 2011 Integrated Energy Policy Report* at 98-99 (Aug. 2011), available at http://www.arb.ca.gov/msprog/clean_cars/clean_cars_ab1085/cec-600-2011-007-sd.pdf.

CARB further assumes sufficient credits will be available to offset compliance difficulties arising from supply shortages of alternate fuels. But as discussed above, a cumulative credit *deficit* is expected by 2015, rendering LCFS compliance essentially infeasible. By 2020, the credit deficit could grow to 30.2-49.3 million metric tons for gasoline and substitutes, and to 12.0 million metric tons for diesel and substitutes. Sierra Research at 8, 14.

Experts predict that the difficulty and cost of LCFS compliance will be unevenly felt throughout the fuel industry, with particular adverse effects on oil sands sources. Because 70-80% of the well-to-wheels emissions of petroleum fuel results from combustion (and thus is essentially fixed per unit of energy), only 20-30% of the total CI relates to means of production or transportation. *Oil Sands* at 7. Given existing competitive pressures to reduce energy use and costs, one study concluded a ten percent CI reduction for oil sands crude is simply “not practical,” requiring a “reduction of approximately one-third to one-half of the GHG emissions from the [well-to-pump segment].” *Id.* at Summary of Key Insights, 21.

For crude oil suppliers, that study concluded, “[i]n effect LCFS . . . require lower-carbon biofuels, natural gas, and electricity to displace oil for transportation use.” *Id.* at Summary of Key Insights. Moreover, according to those accounts, because the production and transportation emissions (i.e., well-to-retail pump) associated with oil sands crude are 1.4-1.7 times higher than the U.S. average (corresponding to 5-15% higher total “well-to-wheels” emissions), “[o]il sands crudes will require about twice the volume of low-carbon fuels to offset emissions as compared with the average crude.” *Id.* at Summary of Key Insights, 9-10.

2. *CARB Failed To Account for Massive LCFS Compliance Costs.*

A range of studies predict that the LCFS will have staggering overall program costs. *See Pike*, 397 U.S. at 142. The Sierra Research study, for instance, draws on analyses and forecasts from the U.S. Energy Information Administration and California Energy Commission to estimate an aggregate compliance cost for California’s LCFS of \$34-\$54 *billion* over the period 2011-2020. Sierra Research at 1. Another recent study estimated that the combined effect of California’s LCFS and Cap-and-Trade programs could increase retail diesel prices by 50 percent by 2020, to \$6.69 per gallon, with an average price differential between California and neighboring States of \$2.22 per gallon. Trucking Report at 3. The report attributes 78% of the expected per gallon wholesale price increase (\$1.47 of a total \$1.89 increase, later converted to retail prices) to the LCFS alone. *Id.* at 27.

These California-specific estimates match cost studies for other jurisdictions. A March 2012 NESCAUM study performed by the Science Applications International Corporation using a U.S. Energy Information Administration model concluded that a 10% CI reduction by 2021 was simply unattainable given the region's full energy needs; at most the program could achieve 4.9% reduction (only a 4% change from baseline). CEA Report at 3-4. Even that smaller change, moreover, would cost *\$306 billion*—of which \$177 billion would be increased expenditures on fuel. *Id.* at 6. And the CEA Report predicted that the reduction would be accompanied by the loss of 147,000 jobs, a doubling of nominal gasoline prices, and an 18-23% increase in diesel and jet fuel prices. *Id.* at 5.

Independent, third-party sources also predict that “[a]mong the principal losers [of the LCFS] are consumers who will have to pay higher costs” at the pump. Canes & Murphy at 22. The studies noted above explain, for instance, that because demand elasticity for petroleum is low, prices might need to rise considerably before a sufficient reduction in gasoline use occurs. *Id.*

These sources foresee that costs may not be limited even to that broad group of consumers who use transportation fuels, but could spread to taxpayers nationwide through negative effects on tax revenue, based on increased application of tax and other subsidies for ethanol. For comparative purposes, one study predicted annual tax revenue losses under a U.S. LCFS of \$1-\$16 billion. *Id.* at 13.

B. The Purported Benefits of the LCFS Are Illusory and Cost-Inefficient.

In addition to the compliance and feasibility concerns discussed above, a number of studies have questioned the likely benefits of California's LCFS, further undermining the degree to which the program can be considered narrowly tailored to California's stated interests. *See supra* p. 22-23.

Beyond CARB's concession that the LCFS will not itself have any "significant" effect on climate change (E.R. 7:1552; RMFU Br. 37-39), the rule is likely to be counterproductive. One recent study, for instance, predicted that "implementing LCFS in the U.S. could encourage 'shuffling' that would double the greenhouse gas emissions associated with crude oil transport to and from regions directly and indirectly impacted by the policy." *See BARR, Low Carbon Fuel Standard "Crude Shuffle" Greenhouse Gas Impacts Analysis* at 1 (June 2010), available at http://www.secureourfuels.org/wp-content/uploads/2011/04/Crude_Shuffle_Report_0616101.pdf. Crude "shuffling" refers to decisions to transport to the United States low-carbon crude produced in other parts of the world, while sending nearby higher-carbon crude (such as from the Canadian oil sands) to distant markets. *See also* Canes & Murphy at 15 (LCFS will "make it more attractive for [Canada] to ship oil sands crude to the Far East, particularly China"). The BARR study predicted that the LCFS will result in a net

increase in global GHG emissions of 7.1-19.0 million metric tons per year due to shuffling effects. BARR at 1-3.

Other studies predict similar unintended consequences. For instance, one predicts that even a *nationwide* LCFS could increase in crude oil consumption in foreign non-LCFS jurisdictions, if the price decrease resulting from lower U.S. consumption of crude induces others to consume more. *See* Canes & Murphy at 16 (2.15 million barrel- per-day decrease in U.S. gasoline demand offset by 1.4 million barrel-per-day increase elsewhere). Similarly, these analyses anticipate that increased ethanol demand in a LCFS jurisdiction would increase the price (and thus decrease consumption) of ethanol in non-LCFS jurisdictions. Replacing ethanol consumption with gasoline consumption will further offset any gains in the LCFS jurisdiction. *See id.* (combined effect of crude price drop and decreased ethanol use is to offset “two thirds of the gains in terms of emission reductions”).

Not only are the LCFS’s expected benefits of uncertain magnitude, they are highly cost-inefficient. One recent study concluded that the LCFS’s total surplus loss (a measure of abatement cost) per ton of CO₂-equivalent reduction ranges from \$307 to \$2,272 per ton. Because these estimates exceed the harm per ton of CO₂-equivalent emission, a LCFS is net welfare reducing: “society would be better off without [it].” Stephen P. Holland et al., *Greenhouse Gas Reductions under Low Carbon Fuel Standards?*, 1 Am. Econ. J. 106, 109 (2009); *accord* Canes &

Murphy at 2 (“[t]he cost per ton of carbon removed by an LCFS is an order of magnitude greater than [both] the estimated costs imposed by [emissions of] GHGs, and . . . the costs per ton of other [reduction] measures,” making LCFS a “highly inefficient” way to reduce emissions). Emphasizing the inefficiency of relying on a LCFS, one recent study further observed that by 2035, EPA’s 2025 54.5 mpg CAFE standard alone will achieve some 90 percent of the reduction expected to occur with a regional LCFS. CEA Report at 6.

* * *

In sum, the LCFS cannot survive because it is poorly tailored to California’s stated ends, and its likely costs and burden on interstate commerce are “clearly excessive in relation to the putative local benefits.” *Pike*, 397 U.S at 142.

CONCLUSION

Accordingly, this Court should affirm the judgment of the District Court.

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CERTIFICATE OF COMPLIANCE

1. This brief complies with the type-volume limitations of Fed. R. App. P. 32(a)(7)(B) because it contains 6,922 words, excluding the parts of the brief exempted by Fed. R. App. P. 32(a)(7)(B)(iii).

2. This brief complies with the typeface requirements of Fed. R. App. P. 32(a)(5) and the type style requirements of Fed. R. App. P. 32(a)(6) because it has been prepared in a proportionally spaced typeface using Microsoft Word 2010 in Times New Roman 14-point font.

Dated: August 13, 2012

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CERTIFICATE OF SERVICE

I hereby certify that I electronically filed the foregoing Brief of Amici Curiae the Chamber of Commerce of the United States of America and the American Petroleum Institute with the Clerk of the Court for the United States Court of Appeals for the Ninth Circuit by using the appellate CM/ECF system on August 13, 2012.

Participants in the case who are registered CM/ECF users will be served by the appellate CM/ECF system.

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