

Chapter 18

STATE AND LOCAL RESPONSES TO CLIMATE CHANGE

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I. INTRODUCTION

Many state and local governments in the United States have responded to the lack of a comprehensive national climate change law by adopting regional, statewide, and local measures to reduce greenhouse gas emissions. These measures vary in their approaches to regulation, and include incentive-based programs promoting voluntary energy conservation efforts, market-based emissions trading programs, and direct regulatory controls mandating reductions in greenhouse gas emissions.

State and local action to address climate change began in fits and starts in the 1980s. A few states, such as New Jersey, developed policies in the late 1980s aimed at improving energy and fuel efficiency and passed laws signaling the states' concern regarding climate change. In the mid-1990s, several states and local governments began to measure their greenhouse gas emissions and to develop general action plans to reduce their emissions. By the late 1990s, some states began to focus on sectoral mitigation strategies. As climate change became increasingly controversial on the political stage, some states responded with legislation criticizing the Kyoto Protocol and prohibiting state agencies from taking any action to reduce greenhouse gas emissions. This backlash, however, was short-lived, and the years between January 2000 and June 2008 witnessed a remarkable proliferation of state and local measures aimed at mitigating climate change. See BARRY C. RABE, PEW CENTER ON GLOBAL CLIMATE CHANGE, GREENHOUSE AND STATEHOUSE: THE EVOLVING STATE GOVERNMENT ROLE IN CLIMATE CHANGE (2002).

Many observers thought these sub-federal measures would have little substantive effect. Some state and local policies seemed designed to place political pressure on national lawmakers

to enact comprehensive climate change policy rather than to actually reduce greenhouse gas emissions. Other policies had relatively short lifespans, likely reflecting the commonly held belief that federal law would render sub-federal actions unnecessary. However, as several more years passed without comprehensive federal climate change policy, the state and local measures began to mature. By the first half of 2013, some measures, like the Regional Greenhouse Gas Initiative discussed in Section II, were undergoing updates and revisions designed to carry the program well into the future. Other comprehensive schemes, like California's cap-and-trade program, had finally begun. It therefore seems less likely that federal law will completely supplant the need for sub-federal climate policies.

Nonetheless, state and local mitigation efforts raise several legal and practical questions. On a practical level, perhaps the dominant question is what benefits these varying actions can yield in light of the global nature of climate change. On the one hand, due to the significant amount of greenhouse gases emitted by each state and many cities, their efforts to reduce emissions would appear to have a significant global effect. Texas, the largest emitting state, releases more carbon dioxide annually than Germany, which ranks 7th in terms of the world's largest national carbon dioxide emitters. *See* World Resources Institute, Climate Analysis Indicators Tool (2003), at <http://cait.wri.org>. Similarly, the climate footprint of Los Angeles exceeds that of Sweden. From this lens, it would appear that state and local action to mitigate climate change could yield important global benefits.

On the other hand, actions taken by state and local governments seem likely to fall to the "Tragedy of the Commons," because any climate change benefits of local actions will only be subsumed by global emissions:

As some commentators note . . . there is an apparent illogic in the flurry of sub-federal activity directed at climate change. When viewed through the lens of traditional commons analysis, it would seem that rational sub-federal actors should eschew unilateral (or even regional) actions to reduce their GHG emissions, given that the atmosphere is a true global commons wherein GHG emissions from one part of the world are entirely fungible with emissions from any other part of the world. Viewed in this light, to the extent that sub-federal GHG reductions actually result in climatic benefits, any such benefits would be lost through such market inefficiencies as free-riding, hold-outs, leakage, and even insouciance. Moreover, regardless of these inefficiencies, the impact of GHG reductions by sub-federal actors on global temperature will necessarily be statistically inconsequential — for all their efforts, the benefits such actors will accrue in terms of avoided global warming will, in practical terms, be nonexistent.

Kevin L. Doran, *U.S. Sub-Federal Climate Change Initiatives: An Irrational Means to a Rational End?*, 26 VA. ENVTL. L.J. 189, 191–93 (2008). To be sure, such concerns exist on the international level as well, since any emissions reductions obtained by a developed country party to the Kyoto Protocol may be readily offset by increased emissions from developing countries. Indeed, Germany and Texas (with roughly equivalent emissions) would seem to be in similar situations. However, whereas national governments may negotiate on an international level to resolve the problems created through this dynamic, state and local governments lack the power

to participate directly in management of the global commons. It would seem, then, that sub-federal governments would avoid unilateral emissions reductions. Yet, this has not been the case. What practical reasons exist for this seemingly irrational state behavior?

One answer is that state and local-level actions may, in the aggregate, yield meaningful greenhouse gas reductions. Collectively, the 17 states that enacted state-wide greenhouse gas-reduction targets include nearly half of the U.S. population, account for about half of the U.S. gross domestic product, and emit approximately 30 percent of the U.S. greenhouse gas emissions and 6.5 percent of global greenhouse gas emissions. *Id.* at 213–14. Thus, it might seem rational for state and local governments to act to limit their emissions, at least if the governments believe that the international community will succeed in reducing global greenhouse gas emissions as well.

In addition, many state and local governments believe that their efforts will result in significant, long-term economic benefits. Construction of renewable energy sources, for example, could provide new employment opportunities. Venture capitalists stand to make a great deal of money by funding successful mitigation technologies. Moreover, “green collar” jobs may promise to pay higher wages and offer greater job security than other traditional industries. Finally, state and local policies that reduce greenhouse gas emissions typically also reduce other localized pollutants and could help reduce the social costs of pollution in local communities.

Regardless of the incentives driving state and local actions, these actions may run into several Constitutional restraints. For example, state emissions requirements could violate the Commerce Clause if they discriminate against or unduly burden interstate commerce. Regional initiatives may conflict with the Compacts Clause of the Constitution. Unilateral state actions may also intrude upon the federal government’s powers over foreign affairs. Finally, as explored in more detail in Chapter 17, some state actions face federal preemption under the Supremacy Clause.

This chapter explores some of the practical and legal questions surrounding the proliferation of state and local climate change laws. It begins with a summary of some of the major state and local regulatory programs aimed at reducing greenhouse gas emissions and otherwise mitigating climate change. Section II.A discusses regional and statewide emissions trading programs, with a particular focus on the northeastern states’ Regional Greenhouse Gas Initiative (RGGI) and California’s statewide cap-and-trade system. Section II.B surveys other common state climate mitigation efforts, including state greenhouse gas emission targets, sectoral emissions limitations or offset requirements, and technology mandates. Section II.C considers the role of local climate action plans. Section III then explores whether state and local measures violate the Commerce Clause and questions how subnational governments may act to reduce greenhouse gas emissions effectively without unduly interfering with interstate commerce. Finally, Section IV briefly assesses the role that states and municipalities should play in the future.

II. STATE & LOCAL ACTIONS TO MITIGATE CLIMATE CHANGE

In the 1990s, only a handful of states and cities had adopted climate change mitigation

strategies. By 2008, however, more than 850 mayors had signed onto the U.S. Conference of Mayors Climate Protection Agreement committing them to take action to mitigate climate change, and every single state had adopted at least one policy to limit or offset greenhouse gas emissions. As it became increasingly clear that the federal government would neither ratify the Kyoto Protocol nor establish a binding national climate regime (*see* Chapters 4, 5, and 12 for a discussion of the U.S. international and domestic approaches to climate change mitigation), state governments also began to form their own regional alliances to enhance the overall impact of their mitigation strategies and create more favorable economic conditions for regulated entities. Since 2008, states and local governments have transitioned from policy enactment to policy implementation. This section first discusses emissions trading programs adopted at the regional and state level. It then provides a short survey of other sectoral mitigation strategies states have enacted. Finally, it explores the role of local climate action plans to reduce greenhouse gas emissions.

A. Emissions Trading

For several years, many observers expected the federal government to adopt a comprehensive national emissions trading program. These expectations reached their peak in June 2009, when the House of Representatives narrowly passed a bill that would have established a federal cap-and-trade system. The Senate, however, never passed its own bill, and federal legislative efforts then stalled.

However, states have played a leading, active role in designing and implementing emissions trading programs. The development of regional climate change initiatives began in 2003, when George Pataki, then governor of New York, invited other governors from the northeastern United States to discuss the creation of a regional emissions trading program for CO₂ emissions from power plants. At that time, most of the northeastern states already had statewide emissions goals or limitations, and most of the states figured that entry into an emissions trading program would enhance the states' ability to meet their existing limitations. The states thus agreed to develop the Regional Greenhouse Gas Initiative (RGGI) and to establish a region-wide cap-and-trade program for CO₂ emissions. The states ultimately completed development and began implementation of RGGI in 2005. Although the governments of the western and Midwestern states created their own regional initiatives — the Western Climate Initiative and the Midwestern Regional Greenhouse Gas Reduction Accord — these programs have yet to mature. Accordingly, this chapter will focus on RGGI.

Among the individual states, California has played a key role in climate change mitigation. In 2012, it finally completed and began implementing its own statewide emissions trading program. Whether it will serve as a template for more comprehensive emissions trading on a regional, national, or even international level remains to be seen.

1. *The Regional Greenhouse Gas Initiative (RGGI)*

RGGI establishes a regional cap-and-trade program for CO₂ emissions from power plants. The initial cap required facilities to meet 2005 emissions levels by 2009 and then reduce emissions by 10 percent below 2009 levels by the end of 2018. Ten states (Connecticut,

Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont) initially signed the Memorandum of Understanding (MOU) establishing RGGI's trading program, although New Jersey later withdrew from RGGI. In February 2013, RGGI staff proposed revisions to RGGI that would lower the emissions cap beginning in 2014 and reduce emissions by 2.5% annually from 2015 to 2020. The notes following the excerpt from the RGGI MOU explain how RGGI might change if the proposed revisions become final.

REGIONAL GREENHOUSE GAS INITIATIVE
MEMORANDUM OF UNDERSTANDING
(Dec. 20, 2005), as amended (Aug. 8, 2006)

NOW THEREFORE, the Signatory States express their mutual understandings and commitments as follows:

1. OVERALL ENVIRONMENTAL GOAL

The Signatory States commit to propose for legislative and/or regulatory approval a CO₂ Budget Trading Program (the "Program") aimed at stabilizing and then reducing CO₂ emissions within the Signatory States, and implementing a regional CO₂ emissions budget and allowance trading program that will regulate CO₂ emissions from fossil fuel-fired electricity generating units having a rated capacity equal to or greater than 25 megawatts.

2. CO₂ BUDGET TRADING PROGRAM

A. *Program Adoption.* Each of the Signatory States commits to propose, for legislative and/or regulatory approval, the Program substantially as reflected in a Model Rule that will reflect the understandings and commitments of the states contained herein. The Program launch date will be January 1, 2009 as provided in 3.C. below.

B. *Regional Emissions Cap.* The regional base annual CO₂ emissions budget will be equal to 121,253,550 short tons.¹

C. *State Emissions Caps.* The regional base annual CO₂ emissions budget will be apportioned to the States so that each state's initial base annual CO₂ emissions budget is as follows:

Connecticut: 10,695,036 short tons
Delaware: 7,559,787 short tons
Maine: 5,948,902 short tons
New Hampshire: 8,620,460 short tons
New Jersey: 22,892,730 short tons
New York: 64,310,805 short tons
Vermont: 1,225,830 short tons

¹Editors' Note: One short ton equals approximately 0.91 metric tons.

For the years 2009 through 2014, each state's base annual CO₂ emissions budget shall remain unchanged.

D. *Scheduled Reductions*. Beginning with the annual allocations for the year 2015, each state's base annual CO₂ emissions budget will decline by 2.5% per year so that each state's base annual emissions budget for 2018 will be 10% below its initial base annual CO₂ emissions budget.

E. *Compliance Period and Safety Valve*.

(1) Compliance Period. The compliance period shall be a minimum of three (3) years, unless extended after a Safety Valve Trigger Event (described below). A subject facility must have a sufficient number of allowances at the end of each compliance period to cover its emissions during that period.

(2) Safety Valve Trigger.

(a) Safety Valve Trigger. If, after the Market Settling Period (as defined below), the average regional spot price for CO₂ allowances equals or exceeds the Safety Valve Threshold (defined below) for a period of twelve months on a rolling average (a "Safety Valve Trigger Event"), then the compliance period may be extended by one year, for a maximum compliance period of 4 years.

(b) Safety Valve Threshold. The Safety Valve Threshold shall be equal to \$10.00 (in 2005\$), as adjusted by the Consumer Price Index (CPI) plus 2% per year beginning January 1, 2006.

(c) Market Settling Period. The Market Settling Period is the first 14 months of each compliance period.

F. *Offsets*. The Program will provide for the award of offset allowances to sponsors of approved CO₂ (or CO₂ equivalent) emissions offset projects for reductions that are realized on or after the date of this MOU. Offset allowances may be used for compliance by units subject to the Program. Among the key features of the offset component of the Program are:

(1) General Requirements.

(a) Minimum Eligibility Requirements. At a minimum, eligible offsets shall consist of actions that are real, surplus, verifiable, permanent and enforceable.

(b) Initial Offset Types. The initial offset project types that may be approved by a Signatory State are: landfill gas (methane) capture and combustion; sulfur hexafluoride (SF₆) capture and recycling; afforestation (transition of land from non-forested to forested state); end-use efficiency for natural gas, propane and heating oil; and methane capture from farming operations. . . . The measurement and verification protocols and certification processes will be consistent across the Signatory States and incorporated into

each State's program.

(c) Additional Offset Types. The Signatory States agree to continue to cooperate on the development of additional offset categories and types, including other types of forestry projects, and grassland revegetation projects. Additional offset types will be added to the Program upon approval of the Signatory States.

(2) Initial Offsets Geography and Limits.

(a) Geographic Location of Offset Projects. Offset allowances may be awarded to projects located anywhere inside the United States, provided offset allowances for projects located outside the Signatory States shall be awarded only if the state or jurisdiction where the project is located has:

(1) established a cap-and-trade program in which a specific tonnage limit has been placed on the greenhouse gas emissions from one or more significant economic sectors in such state; and/or

(2) entered into a memorandum of understanding with the implementing environmental agencies in the Signatory States, pursuant to which the state or other jurisdiction agrees to carry out certain administrative responsibilities to ensure the credibility of offset allowances from that state or other jurisdiction.

(b) Limit on Offsets Use. In each compliance period, a source may cover up to 3.3% of its reported emissions with offset allowances.

(3) Offsets Trigger and Reset.

(a) Offsets Trigger. If, after the Market Settling Period (defined above), the average regional spot price for CO₂ allowances equals or exceeds \$7.00 (2005\$) per ton for a period of twelve months on a rolling average (an "Offsets Trigger Event"), then the percentage of offsets that a source may use to cover its emissions shall increase to 5.0% of its reported emissions for the compliance period in which the Offsets Trigger Event occurs.

(b) Offset Trigger Reset. After an Offset Trigger Event, the limits on use of offsets set forth in Section F.2. shall once again apply commencing at the start of the subsequent compliance period.

(4) Safety Valve Offsets Trigger and Reset.

(a) Safety Valve Trigger. Upon occurrence of a Safety Valve Trigger Event:

(1) offset allowances may be awarded for the retirement of allowances or credits from international trading programs; and

(2) the percentage of offsets that a source may use to cover its emissions shall increase to 10.0% of its reported emissions for the entire compliance period during which the Safety Valve Trigger Event occurs.

(b) Safety Valve Trigger Reset. After a Safety Valve Trigger Event, the limits on use of offsets set forth in Section F.2. shall once again apply commencing at the start of the subsequent compliance period.

G. Allocations of Allowances. Each Signatory State may allocate allowances from its CO₂ emissions budget as determined appropriate by each Signatory State, provided:

(1) each Signatory State agrees that 25% of the allowances will be allocated for a consumer benefit or strategic energy purpose. Consumer benefit or strategic energy purposes include the use of the allowances to promote energy efficiency, to directly mitigate electricity ratepayer impacts, to promote renewable or non-carbon-emitting energy technologies, to stimulate or reward investment in the development of innovative carbon emissions abatement technologies with significant carbon reduction potential, and/or to fund administration of this Program; and

(2) the Signatory States recognize that, in order to provide regulatory certainty to covered sources, state-specific rules for allocations should be completed as far in advance of the launch of the Program as practicable.

H. Early Reduction Credits. Each Signatory State may grant early reduction credits for projects undertaken after the date this Memorandum is signed and prior to the launch of the Program as defined in 3.C. at facilities subject to the Program, which projects have the effect of reducing emissions from the facility by (a) an absolute reduction of emissions through emission rate improvements; or (b) permanently reducing utilization of one or more units at the facility.

I. Banking. The banking of allowances, offset allowances and early reduction credits will be allowed without limitation.

3. MODEL RULE FOR ESTABLISHMENT OF THE CO₂ BUDGET TRADING PROGRAM

A. Model Rule. The Signatory States are collectively developing a draft Model Rule to serve as the framework for the creation of necessary statutory and/or regulatory authority to establish the Program. The Signatory States will use their best efforts to collectively release this draft Model Rule within 90 days after the execution of this MOU for a 60-day public review and comment period. Comments received during this comment period shall be reviewed by the Signatory States, and revisions to the draft Model Rule will be considered. A revised Model Rule will be developed and released within 45 days of the close of the public comment period after consultation among the Signatory States.

B. Legislation and/or Rulemaking. Each Signatory State commits to seek to establish in statute and/or regulation the Program and have that State's component of the regional Program

effective as soon as practicable but no later than December 31, 2008.

C. *Launch of Program.* The Signatory States intend that the first compliance period of the Program will commence January 1, 2009.

4. REGIONAL ORGANIZATION

In order to facilitate the ongoing administration of the Program, the Signatory States agree to create and maintain a regional organization (“RO”) with a primary office in New York City. The RO will be a non-profit entity incorporated in New York and will operate pursuant to by-laws agreed upon by the Signatory States. The RO shall have an Executive Board comprised of two representatives from each Signatory State. The RO may employ staff and acquire and dispose of assets in order to perform its functions.

A. *RO Functions.* The RO will have the following functions:

(1) *Deliberative Forum.* Act as the forum for collective deliberation and action among the Signatory States in implementing the Program....

(2) *Emissions and Allowance Tracking.*...

(3) *Offsets Development.* Provide technical support to the States for the development of new offset standards to be added to state rules.

(4) *Offsets Implementation.* Provide technical assistance to the States in reviewing and assessing applications for offsets projects....

(5) *Limitation on Powers.* The RO is a technical assistance organization only. The RO shall have no regulatory or enforcement authority with respect to the Program

B. *Funding for the RO.* The Signatory States agree that the RO shall be funded at least in part through payments from each Signatory State in proportion to the State’s annual base CO₂ Emissions Budget. . . .

5. ADDITION OR REMOVAL OF SIGNATORY STATES

A. *New Signatory States.*

(1) *New Signatories.* A Non-Signatory State may become a Signatory State by agreement of the Signatory States as reflected in an amendment to this MOU. * * *

(3) *Massachusetts and Rhode Island.* The Signatory States recognize the contributions of Massachusetts and Rhode Island to the design and development of the Program and the negotiation of this MOU. The Signatory States agree that Massachusetts and Rhode Island may become signatories to this MOU at any time prior to January 1, 2008, without any amendment to the terms of this MOU. In the event that authorized representatives of

Massachusetts and/or Rhode Island execute this MOU before such date, they shall receive the following CO₂ emissions budgets:

Massachusetts: 26,660,204 short tons

Rhode Island: 2,659,239 short tons

In the event that Massachusetts and/or Rhode Island become Signatory States under this paragraph, then the regional emissions budget set forth in Section 2.B. of this MOU shall be increased to include the allowance budgets of Massachusetts and/or Rhode Island. * * *

QUESTIONS AND DISCUSSION

1. *Basic Elements of the MOU.* Review RGGI and answer the following questions:

- What are the main elements of RGGI?
- What is the first emissions cap?
- What are the later caps?
- What are the relevant compliance periods?
- Which facilities are covered under RGGI?
- What is the safety valve and how is it triggered?

2. *Offsets.* The cap in RGGI applies only to emissions of carbon dioxide from power plants. However, RGGI allows offsets to come from activities including “landfill gas (methane) capture and combustion; sulfur hexafluoride (SF₆) capture and recycling; afforestation (transition of land from non-forested to forested state); end-use efficiency for natural gas, propane and heating oil; methane capture from farming operations.” RGGI, MOU, ¶ (2)(F)(1)(b). Both the Western Climate Initiative and the Midwestern Regional Greenhouse Gas Reduction Accord intend to establish emissions trading programs for all six greenhouse gases covered under the Kyoto Protocol. What advantages or disadvantages result from limiting emissions caps or offsets to certain types of activities and gases?

RGGI also limits the amount of offsets that sources may use to meet their emissions allowances. If average prices for carbon dioxide allowances remain below \$7.00 per ton (adjusted for inflation) over a twelve-month rolling average period, sources may cover up to 3.3% of their emissions with offsets. A rolling average period means that the average price is calculated every month for the previous twelve months, rather than calculated based on average prices during the calendar year. However, if allowance prices increase, one of two “triggers” may result and allow sources to increase their use of allowances. First, if average prices equal or exceed \$7.00 per ton, an “Offsets Trigger Event” occurs, and facilities may increase the use of offsets to cover up to 5 percent of their reported emissions during that compliance period. Second, if average prices exceed \$10.00 per ton (adjusted for inflation), a “Safety Valve Trigger Event” occurs. During the compliance period in which a Safety Valve Trigger Event occurs, sources may use offsets to cover up to 10 percent of their emissions. They may also include emissions credits obtained through any international trading programs.

RGGI initially placed significant limitations on the use of offsets obtained from activities in states that are not signatories to the MOU. Specifically, sources would receive one allowance for each ton of emissions reductions created within the Signatory States, but they would receive only one-half allowance for each ton of emissions reductions in other states. In other words, offsets would have twice the value if they came from within the Signatory States. The 2006 Amendments to the MOU changed this formula and weighed all offsets from within the United States equally. However, sources may use offsets from another state only if that state has either 1) established a cap-and-trade program limiting greenhouse gas emissions or 2) entered into a memorandum of understanding with the Signatory States that ensures credibility of the offset allowances. What legal challenges would the Signatory States have faced if they had maintained the initial offset allocation based on geographical origin? Do you think RGGI's current requirements for use of offsets from non-Signatory States raises any legal concerns?

3. As with the Kyoto Protocol and the European Union's Emissions Trading Scheme (ETS), RGGI must address issues of additionality, leakage, supplementarity, and linkages to other systems. See Chapter 7. Compare how RGGI has addressed these issues to the ETS. What advantages and disadvantages does the RGGI approach have as compared to that of the European Union? What measures in RGGI increase the linkages of the systems? Can, for example, entities subject to RGGI buy credits from the ETS or Kyoto's Clean Development Mechanism?

4. Allowance Auctions under RGGI. Unlike most emissions trading programs, the Model Rule implementing RGGI anticipated that states would use an auction to distribute initial allowances.

Auctions under RGGI began in September 2008 and began before the RGGI compliance period began on January 1, 2009. During the first auction, held on September 25, 2008, Signatory states released approximately 12.5 million CO₂ allowances, which sold for an average price of \$3.07 each. The second auction on December 17, 2008, involved an additional 31.5 million CO₂ allowances, and these sold for an average price of \$3.38 each. Interestingly, the maximum amount bid for the allowances declined from more than \$12.00 per allowance during Auction 1 to \$7.20 per allowance during Auction 2. See POTOMAC ECONOMICS, POST-SETTLEMENT AUCTION REPORT, REGIONAL GREENHOUSE GAS INITIATIVE, CO₂ AUCTION 1 (OCT. 17, 2008); POTOMAC ECONOMICS, POST-SETTLEMENT AUCTION REPORT, REGIONAL GREENHOUSE GAS INITIATIVE, CO₂ ALLOWANCE AUCTION 2 (Jan. 5, 2008). Demand for carbon allowances exceeded supply by about three times during the second auction. Based on that, are you surprised by the prices of the allowances?

The initial prices actually represent the high-water mark for RGGI allowances. In 2009, the price fell to just above \$2.00 a ton. They dropped further and remained below \$2.00 a ton from 2010 through 2012. Most observers attribute the low prices to the recession and a switch from coal to natural gas, which reduced demand for allowances. Dawn Reeves, *Higher RGGI Auction Prices Boost Confidence in Plan to Tighten Cap*, INSIDE EPA DAILY NEWS, Apr. 11, 2013. Prices finally climbed back up in March 2013, reaching \$2.80 a ton, presumably in response to proposed changes that would tighten the overall emissions cap. *Id.* What do these low prices

suggest to you about the RGGI cap and carbon markets? Should regulators establish minimum prices for carbon allowances to mitigate against unanticipated market developments?

States participating in other regional initiatives have not reached agreement regarding the processes they will employ to distribute allowances. For example, Washington and California, both participants in the Western Climate Initiative, appear to have very different philosophies regarding allowance distribution; while Washington's governor has expressed an intent to distribute allowances for free, California's governor appears likely to use an auction to distribute the allowances. See Warren Callwell, *Governor Favors Mostly Free Permits for Polluters*, SEATTLE TIMES, Dec. 13, 2008. Should states have the option to determine how they will distribute credits to sources that will ultimately trade the credits in a regional trading program? Won't that create inequity between sources in different states and disrupt the trading market? How should states resolve these issues if they wish to move forward with the regional agreement?

5. Proposed Changes to RGGI. In February 2013, RGGI staff proposed several changes to the model rules. RGGI, Summary of Model Rule Changes: February 2013 (2013). Most significantly, they proposed to lower the total amount of CO₂ emissions allowances from 165 million tons per year to 91 million tons in 2014. See Doug Obey, *Stricter GHG Caps May Boost RGGI's Approval for EPA Utility Climate Rule*, INSIDE EPA DAILY NEWS, Feb. 11, 2013. Annual emissions allowances would then further decline 2.5 percent each year from 2015 to 2020. RGGI staff proposed the changes to account for the fact that actual greenhouse gas emissions have fallen significantly since RGGI's adoption, and the program risked becoming irrelevant if the higher caps remained in place. *Id.* In addition, the proposed rule would create a "cost containment reserve" that would allow the sale of additional allowances — beyond those established under the new caps — if market prices exceed certain levels. RGGI, Summary of Model Rule Changes, at 3. These "trigger prices" are: \$4.00 a ton in 2014, \$6.00 in 2015, \$8.00 in 2016, \$10.00 in 2017, and increase by 2.5 percent thereafter. *Id.* Finally, the proposed rule changes would delete the offset triggers discussed in note 2 above. *Id.* Instead, offsets could satisfy no more than 3.3 percent of a party's compliance, regardless of the price of allowances. *Id.* At the same time, parties would have access to new offsets coming from carbon sequestration from forest activities. *Id.* at 4. The participating states will have to adopt the model rules before they take effect. What do you think of the changes?

6. Participation. Nearly half of the states in the country now participate in one of the regional programs. RGGI currently has the largest membership, with nine participating states, identified above, and Pennsylvania and the District of Columbia acting as observers. Observers participate in policy discussions but have not committed to emissions caps. The Western Climate Initiative has seven participating states: Arizona, California, Montana, New Mexico, Oregon, Utah, and Washington. Alaska, Colorado, Idaho, Nevada, and Wyoming are observers. Finally, the Midwestern Regional Greenhouse Gas Reduction Accord has six states — Illinois, Iowa, Kansas, Michigan, Minnesota, and Wisconsin — participating, and three states — Indiana, Ohio, and South Dakota — observing. Not to be left out, in August 2008 Governor Tim Kaine of Virginia called for Southern states to launch a unified regional approach to climate change and energy, although it is still not clear what that will entail. What does this level of participation suggest

about future prospects of national climate legislation? Does the fact that RGGI is still the only truly active program indicate anything?

7. Foreign Affairs. Canadian provinces have also signed on either as observers or participants to the three initiatives. For example, British Columbia, Manitoba, and Quebec are all participating in the Western Climate Initiative. Manitoba is also a participant in the Midwestern Regional Greenhouse Gas Reduction Accord. The Western Climate Initiative participants hope that other Canadian provinces, as well as Mexican states, will join the initiative. Finally, California recently announced that it would link its cap-and-trade program to Quebec's own cap-and-trade system.

The inclusion of foreign governments in the regional programs raises questions under the Compacts Clause of the Constitution, Art. I, § 10, cl. 3, and the broader prohibition against states interfering in foreign affairs. The Constitution vests the power to conduct foreign affairs exclusively in the federal government by giving the President the power to make treaties and Congress the power to raise an army and declare war. Courts rarely invalidate state laws for interfering with foreign affairs, except for "state or local laws purporting to set up their own authorities as mini-state-departments, with power to oversee and either approve or disapprove foreign regimes or the negotiation efforts of the U.S. Executive Branch[.]" Robert K. Huffman & Jonathan M. Weisgall, *Climate Change and the States: Constitutional Issues Arising from State Climate Protection Leadership*, SUST. DEV. L. & POL'Y, 6, 12 (Winter 2008) (quoting personal correspondence with Prof. Laurence Tribe, Feb. 2, 2008). However, as sub-federal governments increase their efforts to limit greenhouse gas emissions, challenges to these efforts have similarly increased. Do regional initiatives that include Canadian provinces impermissibly interfere with foreign affairs? Would a decision by the states participating in RGGI to allow regulated entities to purchase offsets from the Kyoto Protocol's Clean Development Mechanism or the EU ETS violate the Constitution? Consider the following:

In *Zschernig v. Miller*[, 389 U.S. 429 (1968)], the Supreme Court invalidated an Oregon law that prevented a nonresident alien from inheriting property unless certain conditions were met — primarily, a reciprocal right for Americans in the alien's country and the assurance that any property received in Oregon would not be confiscated at home. Noting that states are the typical forum for probate matters, the Court still found the law problematic. "The several States, of course, have traditionally regulated the descent and distribution of estates. But those regulations must give way if they impair the effective exercise of the Nation's foreign policy." *Zschernig* involved a citizen of East Germany, a country with which the United States had no treaties regarding inheritance. Regardless, "even in absence of a treaty, a State's policy may disturb foreign relations."

Crosby v. National Foreign Trade Council [530 U.S. 363 (2000)] is the first in a line of recent foreign affairs cases that focus on state attempts to limit contact with foreign countries. The *Crosby* court heard a challenge to a Massachusetts law that prohibited state entities from buying goods or services from companies doing business with Burma. At the time the law was passed, there was no similar federal prohibition, although a federal law providing for sanctions on Burma was

enacted a few months later. Although the Court spoke specifically of the Supremacy Clause, the decision's rationale focused heavily on how the Massachusetts law tied the President's hands and thus reduced his leverage against Burma.

We need not get into any general consideration of limits of state action affecting foreign affairs to realize that the President's maximum power to persuade rests on his capacity to bargain for the benefits of access to the entire national economy without exception for enclaves fenced off willy-nilly by inconsistent political tactics. * * *

Finally, in *American Insurance Ass'n v. Garamendi*[, 539 U.S. 396 (2003)], the Supreme Court extended the ruling in *Crosby* to areas where there was no explicit federal statute, but merely executive agreements between the President and heads of foreign states. *Garamendi* involved a California law requiring any insurer in the state to disclose information about all policies sold in Europe between 1920 and 1945. This was seen as a way of ensuring that claims belonging to Holocaust victims were paid to any survivors and their heirs living in California.

President Clinton, however, had made executive agreements with Germany, Austria, and France so that all claims against German insurance companies relating to the Holocaust would be heard by an international commission established for that purpose. The Court noted that the President has considerable authority in the area of foreign relations and can act independently of Congress. "While Congress holds express authority to regulate public and private dealings with other nations in its war and foreign commerce powers, in foreign affairs the President has a degree of independent authority to act." Thus, congressional silence does not undermine the executive agreements, which can, even without an explicit conflict, preempt state laws.

Garamendi was a 5-4 decision, with Justices Rehnquist and O'Connor in the majority. Justice Ginsburg's dissent, which was joined by Justices Stevens, Scalia, and Thomas, focused on whether there was an explicit conflict between the executive agreement and the state law. Without such a conflict the dissenting Justices would not allow an executive agreement to preempt a state law. Justice Ginsburg also noted that "the notion of 'dormant foreign affairs preemption' with which *Zschernig* is associated resonates most audibly when a state action 'reflects a state policy critical of foreign governments and involves 'sitting in judgment' on them.'"

Applying the case law above to a scenario in which states attempted to link to a foreign trading system, the lack of a coherent federal policy on GHG regulation at this point strongly points to the constitutionality of such a linkage. The biggest potential problem would occur if there is federal legislation that makes mention of international linkages, or if the President makes clear statements concerning

national priorities for GHG regulation that conflict with linking domestic trading systems with their international counterparts.

Perhaps just as important, any attempt to link to foreign emissions trading systems will be viewed very differently from the *Crosby* and *Giannoulis* cases. States attempting linkages will not be disparaging or otherwise passing negative judgment on foreign parties, as occurred in those cases involving state laws prohibiting or restricting commerce with rogue nations. Without that factor, it is difficult to imagine how courts could find any sort of interference with America's foreign policy prerogatives. Thus, cap-and-trade system linkages are likely permissible overtures to international partners, particularly if the federal government still has not undertaken a comprehensive scheme of carbon regulation.

Robert K. Huffman & Jonathan M. Weisgall, *Climate Change and the States: Constitutional Issues Arising from State Climate Protection Leadership*, SUST. DEV. L. & POL'Y, 12–13 (Winter 2008). Do you agree with the authors' conclusions that state initiative linkages with foreign governments would not intrude upon the federal power to conduct foreign affairs? Why, for example, wouldn't the U.S. repudiation of the Kyoto Protocol and subsequent actions of the Bush and Obama Administrations to negotiate alternatives to the Kyoto Protocol be considered "clear statements concerning national priorities for GHG regulation that conflict with linking domestic trading systems with their international counterparts"? For an alternative perspective regarding foreign policy preemption, see Norman E. Fichthorn & Allison D. Wood, *Constitutional Principles Prohibit States from Regulating CO₂ Emissions*, 20 LEGAL BACKGROUNDER 47 (2005).

8. The Compacts Clause. The Compacts Clause of the Constitution states that "No state shall, without the consent of Congress, . . . enter into any Agreement or Compact with another state, or with a foreign power[.]" U.S. Const. art. I, § 10, cl. 3. None of the regional initiatives have received Congressional approval. Do they run afoul of the Compacts Clause? Consider the following.

In reviewing claims under the Compacts Clause, courts look generally to whether states are attempting to enhance their power at the expense of the federal government.

Where an agreement is not "directed to the formation of any combination tending to the increase of political power in the States, which may encroach upon or interfere with the just supremacy of the United States," it does not fall within the scope of the Clause and will not be invalidated for lack of congressional consent.

[*Cuyler v. Adams*, 449 U.S. 433, 440 (1981).] The first question that courts look at is whether a contractual arrangement, such as a cap-and-trade system, reaches the point of being a "compact" under the Compacts Clause. If it is a compact, then

it generally must be approved by Congress or it will be invalid. Once approved by Congress, it reaches the level of federal law. Thus, for an unapproved state-to-state or state-to-foreign-party relationship to be valid, it must not reach the formality of being a “compact” for these purposes.

To answer the first question, whether an arrangement is an agreement or compact, the courts look to the general indicia of a compact. The Supreme Court summarized the relevant factors in *Northeast Bancorp v. Federal Reserve*[, 472 U.S. 159 (1985)], a decision involving an agreement by holding companies to purchase banks:

The . . . statutes . . . both require reciprocity and impose a regional limitation But several of the classic indicia of a compact are missing. No joint organization or body has been established to regulate regional banking or for any other purpose. Neither statute is conditioned on action by the other State, and each State is free to modify or repeal its law unilaterally. Most importantly, neither statute requires a reciprocation of the regional limitation.

Huffman & Weisgall, at 10–11. From the passage above, one can draw some general criteria for determining whether a contractual relationship is an agreement or compact. There should be some sort of joint organization or body to govern the agreement, if necessary. It should be binding; that is, no state can freely remove itself from the agreement. And it must require a reciprocity of the regional limitation, meaning that one party cannot agree to a nationwide program while another believes the agreement only covers a handful of states.

Regarding a regional cap-and-trade program, courts are unlikely to find that RGGI or a similar program is a compact, unless the agreement contains language that conditions actions (in one state) on actions by other states and is not freely revocable by participant states. It appears, based on *Northeast Bancorp*, that a voluntary union, which allows for a state to back out should it not want to participate, would not be considered a compact for the purposes of the Clause.

However, it is difficult to see how a linked international cap-and-trade framework could be crafted so as not to constitute a compact or even a treaty, which would be impermissible under Article I, § 10, cl. 1, regardless of the presence or absence of congressional approval. In order to have a properly functioning linkage between markets, there would need to be guarantees regarding enforceability and permanence. Without legally enforceable guarantees about the quality of the credits being traded, the markets are unlikely to succeed. There would be a serious problem, for example, if an offset project in California created credits that were purchased by a steel manufacturer in France, and California de-linked itself from the markets. The problem of how the French manufacturer would account for the credits in the absence of a monitoring or verification mechanism to account for what is happening in California is a significant one. The only way to ensure the integrity of the credits being traded in the marketplace is to create a framework that is robust enough to protect all of the parties involved. This would presumably include the inability to voluntarily leave the program and would be most easily accomplished

with some sort of central emissions registry that aggregates and processes data from all participants. These components are almost certain to create a compact under the Compacts Clause, which would then require congressional approval in order to be valid.

The states participating in RGGI seem to have taken particular care to lay out their agreement in an MOU, rather than a contract. The MOU also calls for the states to develop a “Model Rule” to serve as recommended regulations for each state to adopt when implementing the MOU. Do these softer approaches save RGGI from being considered a “compact” under the Compacts Clause? Why or why not?

2. California’s Cap-and-Trade Program

In August 2012, California held its first auction for allowances under its own cap-and-trade program. The California Air Resources Board (CARB) had spent several years designing the program to implement the state’s Global Warming Solutions Act, AB 32. Once CARB decided to use emissions trading as its implementation strategy, it faced several challenges to the program’s design and development. As of early April 2013, the program had survived most of the legal challenges and implementation had begun in earnest.

The Global Warming Solutions Act, excerpted here, provided CARB the legal authority to implement a cap-and-trade program. As you read the text, consider whether CARB could have used a different implementation mechanism to achieve the legislature’s goals.

GLOBAL WARMING SOLUTIONS ACT

Assembly Bill No. 32

Cal. Health & Safety Code § 38500-00

Under existing law, the State Air Resources Board (state board), the State Energy Resources Conservation and Development Commission (Energy Commission), and the California Climate Action Registry all have responsibilities with respect to the control of emissions of greenhouse gases, as defined, and the Secretary for Environmental Protection is required to coordinate emission reductions of greenhouse gases and climate change activity in state government.

This bill would require the state board to adopt regulations to require the reporting and verification of statewide greenhouse gas emissions and to monitor and enforce compliance with this program, as specified. The bill would require the state board to adopt a statewide greenhouse gas emissions limit equivalent to the statewide greenhouse gas emissions levels in 1990 to be achieved by 2020, as specified. The bill would require the state board to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective greenhouse gas emission reductions, as specified. The bill would authorize the state board to adopt market-based compliance mechanisms, as defined, meeting specified requirements. The bill would require the state board to monitor compliance with and enforce any rule, regulation, order, emission limitation, emissions reduction measure, or market-based compliance mechanism adopted by the state board, pursuant to specified provisions of existing law. The bill would authorize the state board to adopt a schedule of fees to be paid by regulated

sources of greenhouse gas emissions, as specified.

Because the bill would require the state board to establish emissions limits and other requirements, the violation of which would be a crime, this bill would create a state-mandated local program.

* * *

PART 3. STATEWIDE GREENHOUSE GAS EMISSIONS LIMIT

38550. By January 1, 2008, the state board shall, after one or more public workshops, with public notice, and an opportunity for all interested parties to comment, determine what the statewide greenhouse gas emissions level was in 1990, and approve in a public hearing, a statewide greenhouse gas emissions limit that is equivalent to that level, to be achieved by 2020. In order to ensure the most accurate determination feasible, the state board shall evaluate the best available scientific, technological, and economic information on greenhouse gas emissions to determine the 1990 level of greenhouse gas emissions.

38551. (a) The statewide greenhouse gas emissions limit shall remain in effect unless otherwise amended or repealed.

(b) It is the intent of the Legislature that the statewide greenhouse gas emissions limit continue in existence and be used to maintain and continue reductions in emissions of greenhouse gases beyond 2020.

(c) The state board shall make recommendations to the Governor and the Legislature on how to continue reductions of greenhouse gas emissions beyond 2020.

PART 4. GREENHOUSE GAS EMISSIONS REDUCTIONS

38560.5. (a) On or before June 30, 2007, the state board shall publish and make available to the public a list of discrete early action greenhouse gas emission reduction measures that can be implemented prior to the measures and limits adopted pursuant to Section 38562.

(b) On or before January 1, 2010, the state board shall adopt regulations to implement the measures identified on the list published pursuant to subdivision (a).

(c) The regulations adopted by the state board pursuant to this section shall achieve the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions from those sources or categories of sources, in furtherance of achieving the statewide greenhouse gas emissions limit.

38562. (a) On or before January 1, 2011, the state board shall adopt greenhouse gas emission limits and emission reduction measures by regulation to achieve the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions in furtherance of achieving the statewide greenhouse gas emissions limit, to become operative beginning on January 1, 2012.

PART 5. MARKET-BASED COMPLIANCE MECHANISMS

38570. (a) The state board may include in the regulations adopted pursuant to Section 38562 the use of market-based compliance mechanisms to comply with the regulations.

(b) Prior to the inclusion of any market-based compliance mechanism in the regulations, to the extent feasible and in furtherance of achieving the statewide greenhouse gas emissions limit, the state board shall do all of the following:

(1) Consider the potential for direct, indirect, and cumulative emission impacts from these mechanisms, including localized impacts in communities that are already adversely impacted by air pollution.

(2) Design any market-based compliance mechanism to prevent any increase in the emissions of toxic air contaminants or criteria air pollutants.

(3) Maximize additional environmental and economic benefits for California, as appropriate.

(c) The state board shall adopt regulations governing how market-based compliance mechanisms may be used by regulated entities subject to greenhouse gas emission limits and mandatory emission reporting requirements to achieve compliance with their greenhouse gas emissions limits.

PART 6. ENFORCEMENT

38580. (a) The state board shall monitor compliance with and enforce any rule, regulation, order, emission limitation, emissions reduction measure, or market-based compliance mechanism adopted by the state board pursuant to this division.

(b) (1) Any violation of any rule, regulation, order, emission limitation, emissions reduction measure, or other measure adopted by the state board pursuant to this division may be enjoined pursuant to Section 41513, and the violation is subject to those penalties set forth in Article 3 (commencing with Section 42400) of Chapter 4 of Part 4 of, and Chapter 1.5 (commencing with Section 43025) of Part 5 of, Division 26.

QUESTIONS AND DISCUSSION

1. The California legislature adopted AB 32 to implement one of the interim goals established by Governor Schwarzenegger through an Executive Order. The Executive Order established an initial goal of lowering California's greenhouse gas emissions to 2000 levels by 2010, and then established more progressive reductions of reaching 1990 levels by 2020 and achieving an 80 percent reduction below 1990 levels by 2050. Exec. Order No. S-3-05 (Cal. 2005). AB 32 codifies the goal of reaching 1990 levels by 2020.

2. On June 26, 2008, the California Air Resources Board (CARB) released its draft Scoping Plan, describing how CARB would meet the goal of reaching 1990 emissions levels by 2020. See CARB, Climate Change Draft Scoping Plan, Executive Summary (June 26, 2008). The draft plan proposes to adopt a state-wide cap-and-trade program that would ultimately link to the cap-and-trade program to be developed under the Western Climate Initiative. *Id.* at ES-3. Unlike many states, it was not a foregone conclusion that California would implement AB 32 through emissions trading or any other type of market-based system. As Professor Alice Kaswan explains:

During negotiations over AB 32, the legislature rejected the Governor's effort to mandate a cap and trade program, instead leaving the decision about whether to adopt a market-based system to the primary implementing agency, the CARB. When the Governor then mandated the development of a cap and trade system through a subsequent Executive Order, some California leaders believed he had betrayed the legislative agreement. Assembly Speaker Fabian Núñez, one of AB 32's co-authors, stated that the "governor was reinterpreting the law based on proposals he had suggested to lawmakers during negotiations over the legislation . . . but that had been rejected by the Legislature." The tension continues. When Governor Schwarzenegger slated 24 out of 123 new positions at the CARB for development of a market-based system, the legislature cut the number to two, displaying its preference for requiring mandatory reductions rather than cap and trade.

Alice Kaswan, *The Domestic Response to Global Climate Change: What Role for Federal, State, and Litigation Initiatives?*, 42 U.S.F. L. REV. 39, 57 n.95 (2007). Many environmental organizations were opposed to emissions trading due to environmental justice concerns. Although most greenhouse gases themselves do not cause localized harm, other pollutants typically emitted with greenhouse gases do. A market-based program could allow levels of locally harmful pollutants to remain high. *Id.* at 57–58. To address these concerns, the California legislature added paragraph (b)(1) to Section 38570, excerpted above. Does this adequately address environmental justice concerns?

3. AB 32 is the first climate change law that establishes significant civil and criminal penalties for violations of any emissions limitations established for greenhouse gases. As with other violations of California's air pollution laws, violators of AB 32 will be subject to penalties ranging from \$25,000 to \$75,000 per violation per day.

4. AB 32 vested considerable discretion in the state board to develop the regulatory mechanism to limit statewide greenhouse gas emissions. Ultimately, as the next excerpt shows, CARB chose to use emissions trading. Do you think this was the right approach? Why or why not?

**CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
AIR RESOURCES BOARD,
OVERVIEW OF ARB EMISSIONS TRADING PROGRAM**

(2011)

AB 32 requires California to return to 1990 levels of greenhouse gas emissions by 2020. All programs developed under AB 32 contribute to the reductions needed to achieve this goal, and will deliver an overall 15% reduction in greenhouse gas emissions compared to the ‘business-as-usual’ scenario in 2020 if we did nothing at all.

The cap and trade program is a key element in California’s climate plan. It sets a statewide limit on sources responsible for 85 percent of California’s greenhouse gas emissions, and establishes a price signal needed to drive long-term investment in cleaner fuels and more efficient use of energy. The program is designed to provide covered entities the flexibility to seek out and implement the lowest-cost options to reduce emissions.

Scope

- Program covers about 350 businesses, representing 600 facilities
- Starts in 2013 for electric utilities and large industrial facilities
- Starts in 2015 for distributors of transportation, natural gas and other fuels
- Designed to link with similar trading programs in other states and regions

The cap

- Set in 2013 at about 2 percent below the emissions level forecast for 2012
- Declines about 2 percent in 2014
- Declines about 3 percent annually from 2015 to 2020

Allowances

- Large industrial facilities
 - Start with free allocation but must buy auctioned allowances later in program
 - Allowances for each industrial sector to be set at about 90 percent of average emissions, based on a benchmark that rewards efficient facilities
 - Distribution of allowances to be updated annually for industries according to the production and efficiency of each facility
- Electric utilities
 - Free distribution, with value of allowances to benefit ratepayers
 - Allowances to be set at about 90 percent of average emissions computed from recent data

Cost containment and market flexibility mechanisms

- Trading allowances allowed, to minimize cost of pollution controls
- Banking of allowances, to guard against shortages and price swings
- 4 percent of allowances will be held in a strategic reserve, to contain costs
- Three-year compliance periods, to buffer annual variations in product output

Offsets

- Allowed for up to 8 percent of a facility's compliance obligation
- Limited to emission-reduction projects in U.S.
- Initially restricted to projects in four areas: forestry, urban forestry, dairy digesters, and destruction of ozone-depleting substances
- Offsets must be independently verified
- Provisions to credit offsets registered with entities outside ARB
- Framework for future inclusion of international offset programs

Emissions reporting and verification

- Capped industries must continue to report emissions annually (as required since 2008)
- These industries must register with ARB to participate in emissions trading market
- Independent third-party verification of reported emissions

Compliance and enforcement

- Every year, capped industries provide allowances and offsets for 30 percent of previous year's emissions
- Every three years, these industries provide allowances and offsets covering the remainder of emissions in that three-year compliance period
- If deadline is missed or there is a shortfall, four allowances must be provided for every ton of emissions that was not covered in time
- The program includes mechanisms to prevent market manipulation

QUESTIONS AND DISCUSSION

1. *The Emissions Caps and Allowances.* The California program operates similarly to RGGI in that it establishes gradual emissions reductions over several years and uses emissions allowances to measure compliance. Industrial facilities must pay for their allowances. However, electric utilities will receive their allowances for free. The program also states that the value of the allowances will benefit utility ratepayers. How will this work? Why should utilities get allowances for free? Does this send utilities or ratepayers the proper signals?

2. *Offsets.* Facilities may use offsets from a limited number of projects to comply with their caps. Offsets can account for only 8 percent of a facility's compliance. What do you think of these design elements? Will they ensure that facilities reduce their own emissions and become more efficient? Are the four types of eligible offset sources adequate? In particular, should the destruction of ozone-depleting substances qualify for offsets, when they have such high global warming potentials? What incentives does that create? See Chapter 7 for further discussion of this issue as it has played out under the CDM.

3. Compliance and Enforcement. Are the compliance and enforcement mechanisms appropriate? If CARB has chosen a 3-year compliance period, why should facilities have to also meet interim annual caps? What do you think of the penalties?

4. Legal Challenges by Environmental Groups. Environmental justice advocates and some other environmental organizations challenged the cap-and-trade program for violating both the Global Warming Solutions Act (AB) and the California Environmental Quality Act (CEQA). *See Association of Irrigated Residents v. California Air Resources Board*, 206 Cal.App.4th 1487 (Cal.App.4th 2012). Initially, they prevailed under CEQA, after a trial court agreed that CARB had failed to adequately consider alternatives to a cap-and-trade system. However, when CARB performed a subsequent analysis under CEQA, the plaintiffs were left only with claims alleging that CARB had violated AB 32. Their most significant claims focused on whether CARB could demonstrate it had adopted “maximum technologically feasible and cost-effective reductions” required under Section 38560.5(c) of AB 32. However, the appellate court readily found the agency had adequately justified its use of emissions trading rather than a carbon tax or more direct regulatory mandates to achieve AB 32’s goals. *Id.*

5. Legal Challenges by the California Chamber of Commerce. In November 2012, shortly before CARB initiated an auction for allowances, the California Chamber of Commerce filed suit alleging the auction amounted to an unlawful tax CARB had no authority to levy. Ann Carlson, *Breaking News: California Chamber of Commerce Sues over AB 32 Auction*, LEGAL PLANET BLOG, Nov. 13, 2012. The case was pending when this edition went to press.

B. Statewide Sectoral Strategies

States have enacted several other laws and policies designed to reduce greenhouse gas emissions from certain sectors. For example, as explored in Chapter 15, several states have adopted Renewable Portfolio Standards requiring utilities to obtain a specific percentage of electricity from renewable sources. They have also developed net metering programs to provide economic incentives for renewable power developers. Similarly, states have developed policies to reduce vehicle miles traveled, as discussed in Chapter 16. Beyond those strategies, some states have focused on certain industrial emitters, particularly coal-fired power plants, to compel emissions reductions beyond those mandated under the Clean Air Act. This section will provide a brief survey of some of the sectoral strategies states have enacted that are not covered in other chapters. Readers interested in learning about more measures should explore the website of the Pew Center on Global Climate Change, which contains an expansive database describing local, state, regional, and federal actions.

1. Emissions Reduction Mandates: Carbon Caps and Offsets

In the late 1990s and early 2000s, utilities and independent power producers proposed to build several new coal-fired power plants around the country during a period some now call the “coal rush.” At the time, the Clean Air Act did not clearly regulate greenhouse gas emissions, and many coal power opponents sought to use state power to limit the development of new plants. They ultimately succeeded in getting several states to enact emissions limitations or

carbon offsets that effectively limited development of new coal-fired facilities.

For example, California enacted Senate Bill 1368, which directed the California Public Utilities Commission (CPUC) to establish emissions standards for power plants supplying electricity to California. Cal. S.B. 1368, 2006 Cal. Stat., ch. 598 (codified at Cal. Pub. Util. Code §§ 8340–8341). Pursuant to this bill, the CPUC established emissions requirements for “all new utility-owned generation and all procurement contracts that exceed three years in length.” See Order Instituting Rulemaking to Implement the Commission’s Procurement Incentive Framework and to Examine the Integration of Greenhouse Gas Emissions Standards into Procurement Policies, Rulemaking 06-04-009, 9 (Cal. Pub. Util. Comm’n., Apr. 13, 2007). Under the CPUC regulations, the greenhouse gas emissions levels for newly generated or procured electricity must not exceed the emissions rates of a combined-cycle natural gas turbine. *Id.* Coal-derived electricity can emit almost three times more carbon dioxide than combined-cycle natural gas plants, and some observers believe that the CPUC regulations have effectively prohibited California utilities from building new coal-fired power plants or entering into long-term contracts with out-of-state coal-fired electricity generators. See Brian H. Potts, *Regulating Greenhouse Gas Leakage: How California Can Evade the Impending Constitutional Attacks*, 19 ELECTRICITY J. 43 (2006). Minnesota enacted a more aggressive law, in which it prohibited any person from constructing new energy facilities or buying or importing power from new energy facilities that would “contribute to statewide power sector carbon dioxide emissions.” 2007 Minn. Laws Ch. 136, art. 5, § 3. Minn.Stat. § 216H.03, subd. 3. As discussed in Section III below, these laws have come under attack for unduly burdening or discriminating against interstate commerce in violation of the Commerce Clause.

A handful of states have enacted legislation requiring new coal plants to offset their greenhouse gas emissions. Oregon, Washington, and Massachusetts require new coal plants to offset a portion of their emissions from any new facility. Oregon and Washington require offsets of 17 percent and 20 percent, respectively, while Massachusetts requires a modest 1 percent offset.

Finally, some states, including Massachusetts and New Hampshire, cap emissions from existing coal-fired power plants. New Hampshire required its three coal-fired power plants to meet 1990 emissions levels by 2006, and Massachusetts required its six plants to reduce their emissions to approximately 10 percent below 1996–1999 levels by 2006–2008 (specific dates vary with each plant).

2. Carbon Capture and Sequestration Technology-based Mandates

In an effort to develop new “clean coal” technologies, a handful of utilities have proposed constructing new coal plants with the capacity to use carbon capture and sequestration (CCS). As the name suggests, CCS facilities collect carbon dioxide emitted from a power plant and transfer the carbon dioxide to a permanent storage location. To date, CCS has yet to become economically viable. As a result, the technology-based mandate has served mostly as a barrier to new coal plant production.

For example, a Washington state law enacted a law in 2007 required all new coal plants to sequester a certain amount of carbon dioxide as a condition of receiving a siting permit. As you read the following excerpt, consider whether other states should adopt Washington's strategy.

**IN THE MATTER OF APPLICATION NO. 2006-01, ENERGY
NORTHWEST PACIFIC MOUNTAIN ENERGY CENTER POWER
PROJECT**

Adjudicative Order No. 2, Order Staying Adjudicative Proceeding
(Wa. Energy Facility Site Evaluation Council, Nov. 27, 2007)

Nature of the Proceeding

This matter involves Application No. 2006-1 submitted by Energy Northwest ("ENW") for certification of a site at Kalama, Washington in Cowlitz County under RCW 80.50. ENW proposes to construct the Pacific Mountain Energy Center ("PMEC") a combined cycle gasification facility for the production of electrical energy. Chapter 80.50 RCW gives the Energy Facility Site Evaluation Council ("EFSEC" or "the Council") the authority to make a recommendation to the governor as to whether the State, by action of the Governor, should enter into a site certification agreement with the applicant that would authorize the construction and operation of PMEC subject to the terms of the agreement.

At this moment, ENW proposes to construct PMEC as a 793 megawatt electrical generating facility. PMEC is proposed to operate on synthetic gas produced from petroleum coke, a byproduct of refining, or coal. ENW filed this application initially on September 12, 2006, before the enactment of Engrossed Substitute Senate Bill 6001 (ESSB 6001), codified as RCW 80.80. ENW was the first in Washington State to propose an Integrated Gasification Combined Cycle (IGCC) project with carbon sequestration. The project involves environmental technology that seeks to minimize carbon emissions, to recapture byproducts such as sulfur, and to utilize as its fuel, products such as petroleum coke, a refinery waste product that might otherwise not be recycled, and coal.

ESSB 6001, RCW 80.80

* * *The new law imposes conditions on pending applications. RCW 80.80.040(11) requires new facilities generating more than 1100 pounds of greenhouse gases per megawatt hour of electricity to sequester greenhouse gases to this level or below. The project must satisfy the criteria of RCW 80.80(11)(a)–(f). . . .

The statute, RCW 80.80.040(13), requires that an application pending on the date the law became effective must include a carbon sequestration plan, referred to herein as a greenhouse gas reduction plan (GGRP), that demonstrates how the project will meet all of the requirements of RCW 80.80(11). RCW 80.80(13) also requires the applicant to make a good faith effort to implement the plan. Only after preparing a detailed sequestration plan, receiving a site certification agreement, and making a good faith effort to implement the plan, may an applicant who finds implementation "not feasible" be excused from its terms and allowed to purchase greenhouse gas offsets.

Energy Northwest's Greenhouse Gas Reduction Plan

ENW filed the GGRP on July 30, 2007. The GGRP explained ENW's view that a plan such as contemplated by the statute is impossible to prepare at present based on the technological and economical infeasibility of geological sequestration. Instead, ENW presented a proposal to prepare a specific plan at some future time, perhaps as late as 2020, when geological sequestration becomes a proven technology for use by power plants and a number of asserted technological, engineering, and legal questions have been answered. In the interim, ENW proposed to consider offsets based on assumptions that it enumerated in its GGRP. * * *

Sufficiency of the GGRP

The most significant question — and the only question posed to the parties that the Council will address in this order — is whether the GGRP as proposed legally complies on its face with the requirements of the statute.

We determine as a Council, and without dissent, that the ENW GGRP fails to meet the minimum requirements of the law, that it is therefore insufficient as a matter of law, that its provisions cannot be supplemented to the level of minimal sufficiency by mere revisions, and that its flaws are pervasive and affect the processing of the entire application. Therefore, we stay the adjudicative process and direct the Council staff to suspend application processing pending action by the applicant to cure the present flaws.

1. The Basic Flaw.

The basic flaw in ENW's GGRP is that it is not a plan at all in terms of the statute — it does not identify specific steps it will take to implement sequestration. Instead, it is a plan to make a plan, and it vows to begin making specific steps toward implementing geological sequestration at some future time, after geological sequestration becomes commercially accepted for use in reducing emissions of fossil-fueled power plants. It proposes that eventually, at some indefinite future time, it will seek to develop a specific plan for accomplishing the purposes of the statute. In the meantime, it argues, after the fifth year of operation, it may purchase offsetting greenhouse gas emission rights from unspecified sources because a specific plan is futile and it need not make a good faith effort to comply with the letter of the statute.

The reason this is a fundamental flaw is that it asks the Council to invalidate the statute — an action that is clearly beyond the power of an administrative agency. This is not an ambiguous statute, which might be cured by interpretation of its terms. Instead, the statute is detailed and specific in its requirements. The applicant must make specific plans for specific actions to accomplish a specific goal — geologic or other approved sequestration of greenhouse gases — and receive from the Governor a Site Certification Agreement, before it can ask for relief by the purchase of offsets. Then, only after ENW has made a good faith effort to implement the plan, and only after the Council has agreed that implementation is “not feasible,” may it be excused from compliance with plan implementation and allowed to purchase offsetting emission rights.

ENW argues that sufficiency of the GGRP is a factual issue that must be determined only after an evidentiary hearing. We strongly disagree. We need only look to the statute and the plan that ENW presented to determine whether the plan contains the elements that the statute requires.

We determine that the GGRP simply does not contain the elements required by statute, not that a plan containing the required elements is inadequate in its measures.

2. Futility or Impossibility of Compliance.

ENW argues that compliance with the statute is futile. While futility may be true from its perspective, which would require a fully developed carbon sequestration industry before literal compliance with the statute is mandated, it is not true from the standpoint of the other parties. They point out that some projects must be within the first wave of technological development — if all waited until a technology became mainstream, technology would never reach mainstream. They also note that sequestration technology is mature in other high-volume applications, such as extraction of oil from wells.

Futility is also not true from the plain language and the clear meaning of the statute. The other parties point out that the statute was enacted specifically to deal with applications in ENW's present situation and that the legislature is presumed to know the meaning and the application of its enactments. This is not an ambiguous statute, which might be susceptible of interpretation. The law is clear and specific in its application to this project. We will not interpret the statute to disregard the plain meaning of the legislature.

ENW argues that it made a good faith effort to comply with the statute. We do not impugn its motives. The test we must apply, however, is not whether it has made a good faith effort, but whether its GGRP complies with the clear terms of the law. We determine that it does not.

ENW proposes application of the “doctrine of impossibility,” citing a case in which physical incapacity excused a teacher from the duty to teach, and it argues that under terms of the “vested rights doctrine,” the law is invalid in application to PMEC because the application was filed before the law became effective and because of “constitutional principles of fairness and due process.” ENW does not contend that we have jurisdiction to invalidate the law on those bases and it does not address whether the vested rights principle also applies to matters such as this, which affect the public health, safety and welfare. * * *

4. Conclusion.

In sum, the plain reading of the statute demands a carbon sequestration plan, with specifics, and ENW has provided only a general statement of intention that it will begin creating such a plan in the future at some indefinite time. In its brief, ENW calls this proposal “adaptive management,” under a practice that allows details of compliance to be developed through different measures, over time, allowing learning from and improving upon compliance measures. RCW 80.80 does not allow adaptive management in lieu of clear statutory requirements, and ENW's proposal is a proposal to develop goals and measures later. It is not adaptive management, which pursues specific goals through clearly identified means.

We conclude that ENW's proposed greenhouse gas reduction plan fails to meet the requirements of the statute, and must be rejected.

QUESTIONS AND DISCUSSION

1. *Technology-Forcing and Technological Infeasibility.* RCW 80.80.040(11) clearly qualifies as a technology-forcing law in that it directs new coal plants to establish particular plans for carbon capture and sequestration. Most technology-based standards are in fact "performance standards," which establish emissions limitations based on technological capacity but do not direct regulated entities to employ specified types of technology. Do you think Washington State's approach to forcing technological innovation is effective? Is it fair? What other ways can legislatures force or promote technological innovation?

2. *Carbon Capture and Sequestration.* Some scientists believe that CCS technology is key to climate change mitigation. A CCS facility collects carbon dioxide emissions from a stationary source, transfers the carbon dioxide to a sequestration site, and then permanently stores the carbon dioxide in a sequestration facility. While the concept is rather simple, the mechanics have not yet proven to be. For example, many proposed sequestration sites are located underground, in natural formations. Depending upon the geological conditions of the site, carbon dioxide may leak into areas and ultimately be released into the atmosphere. In addition, geological sequestration may alter the natural conditions of the underground environment, resulting in unintended consequences. As a result, finding a secure, long-term sequestration area is often difficult.

Scientists involved in CCS development emphasize the importance of developing CCS testing facilities to show that CCS is a viable climate change mitigation technology. However, many conservationists oppose the construction of entirely new coal-fired power plants for the purpose of establishing CCS demonstration projects. How can a technology develop and mature under these circumstances?

3. Technology-forcing laws could present significant risks of "leakage" if adjacent states do not have similar requirements. For example, Washington's CCS mandate could encourage companies to build new coal-fired power plants in nearby Idaho, Montana, or Utah, and these states may have weaker emissions limitations for greenhouse gases and other pollutants. How should the law account for the potential risk that state technology-forcing laws could promote a race to the bottom in other states?

4. *Potential Conflicts between State and Federal Goals.* The federal government has demonstrated significant support for CCS, nuclear power, and other types of energy production that some states have rejected. Is it acceptable for states to impose regulatory requirements that effectively prohibit development? Would your answer be the same if states opposed development of wind or solar power facilities? How should governments draw the lines between acceptable state regulation and impermissible state interference with federal policies?

C. Local Climate Action Plans

Since the 1990s, several local governments have developed climate action plans designed to reduce greenhouse gas emissions. Portland, Oregon was probably the first local government to adopt greenhouse gas emissions limitations in 1993, when it established a goal of reducing its emissions to 10 percent below 1990 levels by 2010. Since then, many other states have adopted their mitigation plans.

Legal scholars often question the value of these plans. Some believe they serve little value in addressing a local problem. They also question the motivations of local governments who enact them. As you read the next article, consider what value local climate action plans offer.

KATHERINE A. TRISOLINI, ALL HANDS ON DECK: LOCAL GOVERNMENTS AND THE POTENTIAL FOR BIDIRECTIONAL CLIMATE CHANGE REGULATION

62 STAN. L. REV. 669, 672-77, 692-703, 708-713, 718-721, 724-727 (2010)

. . . It is not surprising that scholars are skeptical of local governments' ability to contribute meaningfully to greenhouse gas reductions. The very nature of climate change seems to render it incompatible with local control. . . . Unlike most familiar pollutants, greenhouse gas emissions stem from hundreds of human activities (as well as natural processes), creating a multitude of possible regulatory targets and potential impacts on many economic sectors. Their environmental impacts are delayed until long after the emissions occur, exacerbating the difficulty of creating political agreement. Most critically, because greenhouse gases mix in the atmosphere and create global effects, reductions from one locale can be offset by increases from another locale on a different continent.

Cities and other small jurisdictions appear to have the least incentive and to be the most poorly situated of all U.S. governments to impact a pollution problem of such magnitude. The sheer scale of the problem and the potential for globally catastrophic impacts appear to dwarf local efforts. . . . Local governments lack power to regulate vehicle technology, fuel composition, and power plant technology and licensing, all critical determinants of transportation and energy emission levels. Like energy production and transportation, the substantial contribution to the United States' emissions from industrial and agricultural processes is similarly beyond local governments' regulatory jurisdiction. How could local governments play any meaningful role in reducing U.S. emissions given their limited geographical and legal jurisdiction? With the global scale of climate change, why should we care what local governments are doing? * * *

Although local policies cannot displace the need for federal regulation, federal climate change policy will be more likely to succeed if its architects recognize this potential local contribution and facilitate the reductions local governments have begun to implement. Dismissing local efforts as trivial may lead scholars and lawmakers to overlook effective means of reducing greenhouse gas emissions that rely on well-studied, mature, and available technologies that can be locally regulated within existing institutions. It may also obscure the potential to create substantial emissions reductions by engaging the state and federal

governments in traditionally local domains in which cities are now struggling to regulate. Examining both the local potential and current efforts provides a broader picture of the potential regulatory landscape, both in terms of regulatory targets and in terms of potential regulators.

[T]his movement of local governments grew rapidly between 2000 and 2009 with members quickly producing and implementing climate change policies, starkly contrasting with federal inaction. As of November 2009, over a thousand mayors representing more than eighty-six million Americans had signed the U.S. Conference of Mayors Climate Protection Agreement, which the Conference unanimously endorsed in 2005. Signatories pledge to meet or beat the Kyoto Protocol's emissions reduction targets in their communities, lobby the state and federal governments to set similar emissions reduction targets, and lobby Congress to pass bipartisan legislation establishing a national cap-and-trade system. One estimate found that if just the first 230 signatory cities succeed, their reductions would equal those expected from Kyoto commitments made by the United Kingdom, the Netherlands, and all Scandinavian countries combined. A 2008 study assessed the potential collective impact of the 684 cities that had signed by that year, finding that their combined effect would be to reduce projected 2020 emissions by seven percent, which would account for twenty-seven percent of the reductions required to lower projected 2020 emissions to 1990 levels.

Meanwhile, 569 U.S. cities participate in the Cities for Climate Protection Campaign (CCP) under the auspices of International Council for Local Environmental Initiatives (ICLEI). Launched in 1993, the CCP Campaign aims "[t]o build and support a worldwide movement of local governments who are engaged in climate protection . . . and whose actions achieve measurable reductions in local greenhouse gas (GHG) emissions." Local governments that join the CCP Campaign must pass a resolution pledging to reduce greenhouse gas emissions from governmental operations and community-wide activities. At the time of its 2006 Progress Report, 159 U.S. cities were members of ICLEI, representing fifty-five million people, or twenty percent of the U.S. population. As of January 18, 2010, this figure has jumped to 545 cities, demonstrating a rapid growth in membership. In addition, Chicago, Houston, Los Angeles, New York, and Philadelphia have joined the C40, a group of the largest world cities collaborating on climate change projects with the Clinton Foundation. * * *

II. Local Potential to Reduce Greenhouse Gas Emissions: Demographics and Relevant Powers

A. Viewing Local Efforts Collectively

The total emissions within the ambit of any single local government are only a fraction of worldwide or even U.S. emissions, again suggesting that the mitigation potential of local policies will be trivial. Yet, if we consider those policies collectively, the picture begins to change. Why should we look at local governments collectively? An empirical review of local governments' climate change activities and current demographics that also takes into account sound policy reasons supports a collective assessment of local governments' potential to reduce greenhouse gas emissions. First, local governments are engaged in collaborative efforts to reduce greenhouse gas emissions. They participate in networks, encourage other local governments to join their efforts, and appear to be part of a blossoming social movement. They are allying themselves with

one another, sharing information and techniques, and proselytizing to other local governments. Moreover, their own assessments of potential mitigation often consider these efforts collectively.

Second, when demographics are taken into account, the potential for cities' policies to be collectively substantial becomes apparent. Since 1790, the U.S. has become an increasingly urbanized country; the proportion of the population residing in urban areas increased from 5.1% in 1790 to 79.0% in 2000. Much of this population resides within the jurisdiction of city governments: "Although municipal corporations account for only a tiny portion of the United States' total land area, in 2002 nearly 174 million Americans, or almost sixty-two percent of the population, lived in cities." The five cities participating in the C40 alone contain nearly twenty million people, and ten percent of U.S. emissions come from the ten largest cities in the United States, all of which participate in one or more networks. (For the largest U.S. cities, emissions considered even individually are not entirely insignificant; the city of Los Angeles alone emits approximately the same amount of carbon dioxide as the entire country of Sweden.) * * *

[S]everal areas of local power--such as planning and zoning, waste management, proprietary functions, and building code development and enforcement--provide means for targeting consumption. Local emissions reduction plans can be implemented by amending or replacing existing procurement policies, zoning codes, rules and facilities for waste services, and building codes. Thus, many local plans will not require new administrative structures (such as likely will be required by a federal cap-and-trade scheme, for example) but rather can be implemented by existing bureaucracies such as planning, building and safety, and waste management departments. * * *

[T]his Article . . . reviews four areas of well-accepted local power: (1) buildings and energy efficiency; (2) zoning and land use, including the setting of parameters for building permits; (3) garbage and waste collection and processing; and (4) local governments as proprietors--of buildings, public utilities, and streetlights, among many other things.

1. Buildings and energy efficiency

Building energy efficiency provides perhaps the most straightforward and dramatic opportunity to reduce greenhouse gas emissions downstream by shrinking demand. Improving buildings' environmental performance--through green building programs, efficiency standards, and/or building code changes--provides a particularly attractive means for reducing greenhouse gases. Mature, available, and well-studied technologies render building energy efficiency a technologically easy, proven, and often cost-effective emissions reduction strategy.

Because reduction in demand continues throughout a building's lifespan, employing these technologies reduces both immediate and long-term greenhouse gas emissions. Moreover, because these reductions are built in to the physical environment, construction or rehabilitation of existing building stock creates lasting emissions savings regardless of subsequent political changes. Forecasts of future construction underscore the potential to reduce emissions through improved building efficiency: between now and 2050, U.S. residents will build or replace an estimated 89 million residential units and construct 190 billion square feet of commercial, office, institutional, and other non-residential space.

Why is this a local issue? In the United States, local governments have significant power to regulate building construction and renovation through their traditional authority to adopt and enforce building codes. While a number of studies have identified potential emissions savings from these improved efficiencies, the regulatory role of local governments in implementing these changes has not received much attention. However, as detailed below, many cities and some counties have enacted new green building programs, largely in response to climate change. * * *

a. Energy demand from buildings, potential reductions, and barriers

The majority of U.S. electricity production serves buildings' energy demands; residential and commercial structures consume sixty-eight percent of the electricity used in the United States, and thirty-nine percent of all of the energy of any kind. This power demand creates thirty-eight percent of the U.S.'s carbon dioxide emissions. * * *

Despite providing a net economic benefit, numerous barriers impede these economically and environmentally rational actions. As the IPCC explains, "due to the long lifetime of buildings and their equipment, as well as the strong and numerous market barriers prevailing in this sector, many buildings do not apply these basic technologies to the level life-cycle cost minimization would warrant." Some barriers simply stem from the absence or cost of gathering information. In addition to general lack of familiarity with energy efficiency technologies, many developers operate using highly inflated estimates of the cost of green building--sometimes more than three times higher than actual costs. Homeowners also overestimate the cost and simultaneously undervalue efficiency gains, missing fiscally prudent weatherization improvements with rapid payback periods.

At the same time, even with adequate information, improper incentives may act as a barrier. Landlords have little financial incentive to pay for energy efficiency when tenants realize the benefits through reduced energy bills. Similarly, developers have little motivation to pay for efficiency features that will reduce costs for future owners unless they are certain that the added cost can be more than recouped. Homeowners also may be deterred from investing in more expensive retrofitting if it exceeds their anticipated duration of ownership--on average seven to ten years. Nonetheless, most homeowners fail to invest in simple measures with quick payback periods, likely stemming from inadequate information combined with a general bias against up-front costs. * * * [Local governments, which have regulatory power over building codes, can offset these distorted incentives through mandated efficiency measures.]

2. Zoning and land use power: reducing vehicle use

Local governments also substantially shape the built environment through their well-accepted power over zoning and land use. This power places local governments in a potentially critical position for reducing transportation emissions because land use and urban form shape vehicle usage.

a. Approaches to reducing transportation emissions

* * * Policies aimed at reducing transportation's role in U.S. greenhouse gas emissions have focused largely on increasing vehicle fuel efficiency and promoting low-carbon fuels. At the federal level, the Energy Independence and Security Act of 2007 (EISA) mandated that automobile manufacturers raise Corporate Average Fuel Economy (CAFE) standards to thirty-five miles per gallon by 2020. Yet, projected increases in the average daily driving of Americans, or their "vehicle miles traveled" (VMT), threatens to undermine the effect of these policies.

A recent EPA study finds that "[b]y far the most significant factor to past growth in GHG emissions [from transportation] has been increases in the number of vehicles on the road and in vehicle usage." Similarly, the Center for Clean Air Policy warns that growth in VMT in the United States "has outpaced population growth and is projected to continue to outstrip improvements in vehicle efficiency." * * *

[I]ncreasing VMT and growing population makes flattening the VMT curve critical to reducing transportation emissions—at least absent much more stringent fuel content or fuel efficiency standards than have thus far been deemed politically feasible. Transportation experts refer to approaches that capture all three elements — increased vehicle fuel efficiency, low carbon fuel standards, and VMT reduction — as the "three-legged stool." * * *

c. How local governments can influence VMT

Local governments have an array of short- and long-term tools to affect VMT. Local governments can reduce VMT by "concentrat[ing] growth in core service areas with existing infrastructure and housing . . . modifying zoning ordinances to allow mixed-use development, [and] providing tax credits and incentives for transit-oriented development." Changing zoning to redirect future growth away from sprawl and single-use zoning to more compact, mixed forms that allow residents to walk, bike, or use transit to reach amenities can reduce VMT in both the short and long run. Notably, part of this can be accomplished with a deregulatory approach to zoning that eliminates restrictions on commercial uses in residential areas, allows construction of higher density apartments and condominiums, reduces or eliminates setback and parking requirements, and allows homeowners to create small housing units known as "granny flats."

Local governments' short-term options to reduce VMT predominantly focus on methods other than zoning. They can, for example, incentivize their own employees to reduce car usage in commuting, encourage large businesses to allow telecommuting, or require large employers to provide parking cash-outs. They can also reduce parking requirements (many of which have little empirical backing) or price parking according to market demand. Although compact development is a long-term strategy, even small steps to increase density can reduce VMT. Numerous studies demonstrate that residents of well-done infill housing drive much less than those in developments on the urban fringe. . . .

In the long term, projected population growth gives local governments substantial potential to shape urban form (and consequently VMT) by changing zoning to support compact development. Studies estimate that "two-thirds of the development on the ground in 2050 will be built between now and then." While cities cannot instantly change development patterns that have existed since World War II, they can shift the direction of this new development through a

combination of zoning and policy changes that promote infill, provide a mix of uses, and create pedestrian and transit-oriented development. This combination of policies is often referred to as “smart growth.” * * *

d. What are local governments doing?

While variation in urban form and the context-specific nature of land use planning renders smart growth strategies difficult to compare across jurisdictions, several data points suggest growing adoption of these principles among at least some local governments. Since 2000, many cities have adopted or begun developing zoning and land use codes based on smart growth principles--some amending codes to create special districts and others completely overhauling the existing code rather than amending it around the edges. As with green building policies, these geographically and demographically diverse efforts have included such metropolitan areas as El Paso, Louisville, and Miami--not jurisdictions usually associated with Berkeley-style environmentalism. * * *

3. Waste and garbage

Waste management, another typical and well-accepted area of local power, has the potential to decrease energy demand while simultaneously eliminating new sources of greenhouse gas emissions. Because landfills and sewage treatment plants generate methane from discrete sites, they can also generate power to displace demand for energy from greenhouse gas-intensive sources.

a. Recycling

Local governments operate the majority of municipal solid waste programs in the country, making them critical regulators of the volume of waste and the rate of recycling. Recycling has salutary effects on emissions both by reducing energy demand and eliminating sources of methane, a potent greenhouse gas. Recycling lessens emissions from collection and transportation of waste to landfills while also lowering the demand for raw materials and the energy needs to transform them into products. Less waste in landfills also means fewer anaerobic processes in landfills that generate methane. Finally, recycling prevents the release of carbon dioxide from waste disposal systems that rely on incineration.

Local governments’ efforts to increase recycling (and thereby reduce the waste stream) can potentially have dramatic effects. According to the EPA, in 2003 U.S. communities recycled an estimated 30.6 percent of their total municipal solid waste. The EPA estimated that increasing the average to thirty-five percent would result in total energy savings of about 1,720 trillion Btu — the equivalent of 13.7 billion gallons of gasoline or 297 million barrels of crude oil. This would have the same effect on carbon dioxide emissions as removing twenty-seven million passenger cars from the roadway each year.

Historically, local governments have been at the forefront of the national push towards recycling. Concerns about climate change have caused them to redouble their efforts. Many local governments’ climate action plans target diversion of solid waste from landfills and incinerators

to recycling facilities. As described below, plans employ a range of carrots and sticks to increase recycling rates, including education and outreach, improved access with new or expanded curbside pickup, mandatory increased recycling of a percentage of construction debris, and in some cases penalties for failing to recycle. * * *

b. Methane capture

For solid waste that cannot be eliminated through recycling or that sits in pre-existing landfills, methane-to-energy systems can capture methane emissions and generate energy to replace demand for fossil fuel based power. Sewage and water treatment plants similarly generate methane that can be captured in this manner. * * *

4. *Proprietary functions of local governments*

We are the ones building roads, designing mass transit, buying the police cars and dump trucks and earth-movers. We're the ones lighting up the earth when you look at those maps from space. Together we have huge purchasing power, and if we invest wisely, that can have huge implications for the environment.

— Mayor Patrick McCrory, Charlotte, North Carolina

Local governments' most direct (and likely least politically challenging) route to reducing downstream energy consumption is through targeting their own resources and operations. Potential reductions from proprietary activities alone may be substantial given the sheer number of local governments, the size of their operations, and the types of things that they own and operate. In 2002, the United States had nearly 40,000 general-purpose local governments. When combined with school districts and special use districts, the number is nearly 88,000. The collective number of local employees as compared with the federal and state governments provides a rough sense of the size of local government operations. As of the 2006 census, local governments in the United States employed nearly twelve million full-time equivalent workers as compared to the federal government's 2.5 million and the collective 4.25 million of all fifty states combined. . . . In addition to buildings, vehicles, lighting structures, and schools, local governments own utilities, airports, landfills, and ports, among many other things.

Large cities provide a particularly useful lens through which to grasp the potential impact of proprietary activities and operations. Los Angeles estimates that municipal operations accounted for nearly seventeen million metric tons of CO₂, comprising one-third of the carbon dioxide output from the area. Part of the reason this figure is so high is that, like a number of large local governments, the city owns its utility company. It also directly controls large sources of emissions, including several airports and the Port of Los Angeles.

A 2007 survey of cities participating in the Mayors Agreement conducted by the United States Conference of Mayors provides overview data on how climate policies have influenced proprietary activities. The survey found that, of the 134 cities responding, representing populations of over twenty-five million people, all but four had upgraded to more energy efficient lighting in "public buildings, streetlights, parks, traffic signals, and other applications, or plan[ned] to do so in the next year." Overall, eighty-nine percent "ha[d] already installed more

energy-efficient [lighting] technologies such as compact fluorescents, LEDs or photovoltaic street lights; [and] another eight percent [were] considering doing so in the next year.” Eighty-eight percent of cities required or planned to require within the next year, that new city buildings meet improved energy efficiency standards, and eighty-seven percent required or would soon require that any city buildings undergoing major rehabilitation upgrade energy efficiency. Forty-six percent of cities had established procurement policies favoring alternative fuel vehicles or hybrids and, another thirty-three percent were considering instituting them. Most responding cities also already used or planned to soon use renewable energy to meet some portion of their operating needs: sixty-four percent of the cities already used some renewable energy, and another twenty percent planned to start using renewables in the next year. Cities employing renewables estimated that, on average, eighteen percent of their total city energy was being provided by these sources.

QUESTIONS AND DISCUSSION

1. Are you convinced by Professor Trisolini’s article that local governments have a meaningful role to play in climate change mitigation? When one considers the effect a single city can play in reducing greenhouse gas emissions, it may seem miniscule. Yet cities collectively contribute about 70% of global emissions. Indeed, this dynamic plagues climate change mitigation generally: each coal plant, refinery, or shale play emits only a minute fraction of global greenhouse gas emissions, yet in the aggregate, coal, oil, and natural gas account for the vast majority of global carbon dioxide emissions. How should policies account for this “one percent problem,” as Professors Stack and Vandenberg have called it? See Kevin M. Stack & Michael P. Vandenberg, *The One Percent Problem*, 111 COLUMBIA L. REV. 1385 (2011)?

2. Portland’s efforts to lower its greenhouse gas emissions have received national and international attention. See Hari M. Osofsky & Janet Koven Levit, *The Scale Of Networks?: Local Climate Change Coalitions*, 8 CHI. J. INT’L L. 409, 415–26. (2008). For example, Portland’s efforts to increase bicycle ridership earned Portland a rare platinum rating by the League of American Bicyclists for being a “Bicycle Friendly Community.” In addition, Portland was ranked as the top sustainable city in 2006. See The SustainLane 2006 U.S. City Rankings (2006). Portland’s efforts yielded a per capita emissions reduction of 12.5 percent. Osofsky & Levit, *The Scale of Networks?*, at 411. However, despite these efforts and accolades, Portland’s overall greenhouse gas emissions increased by 0.7 percent between 1993 and 2005. Professors Osofsky and Levit link the increased emissions to an increase in Portland’s population. What are other possible reasons that a city like Portland’s overall emissions may increase over time?

3. Local climate change mitigation measures seem particularly prone to problems associated with leakage. As Portland’s experience suggests, one city’s growth control measures may drive up property values within city limits and result in increased population growth beyond the city limits. Moreover, cities do not always have control over decisions that will affect greenhouse gas emissions within their geographic boundaries. For example, states and the Environmental Protection Agency (EPA) have the final say regarding whether facilities should receive air pollution permits under the Clean Air Act. Similarly, state governments decide how transportation funding is spent and may override local sustainability goals to implement state

transportation plans. Should local governments that have invested in greenhouse gas reductions have a stronger voice in decisions that may erode these investments? What type of law could you design to protect local interests?

4. Evaluating Your Local Climate Action Plan. Does your city or community have a climate action plan? If not, why do you think that is? If so, were you aware it existed? Is it comprehensive? Is it effective? How would you design or redesign your local climate action plan if you could?

III. DOES THE COMMERCE CLAUSE PROHIBIT SUB-FEDERAL REGULATION OF GREENHOUSE GAS EMISSIONS?

The Supreme Court has repeatedly held that state actions that discriminate against or unduly burden interstate commerce violate the Constitution. As states have increased their efforts to mitigate climate change, they may face Commerce Clause challenges. For example, a Renewable Portfolio Standard (RPS) that requires utilities to obtain a certain percentage of power from in-state sources would likely face a claim that the law discriminates against out-of-state renewable power facilities. But what about an RPS that requires a utility located in a sunny state to obtain a certain amount of power from solar facilities? Presumably, solar facilities in other states could satisfy the RPS, but what if they have less solar capacity? Would such a law discriminate against interstate commerce? Would it place an undue burden on interstate commerce? The following materials attempt to answer these questions.

In its early incarnation, the “dormant” Commerce Clause restricted most state regulation of interstate regulation. See *Public Utilities Commission of Rhode Island v. Attleboro Steam & Electric Co.*, 273 U.S. 83 (1927). Over time, the Supreme Court began to relax the restrictions against state regulation of interstate commerce. Rather than categorically restrict state regulation, the Court instead now prohibits state regulation that amounts to economic protectionism. Thus, the Commerce Clause prohibits any state from enacting laws that (1) discriminate against interstate commerce, either facially or in practice, *Philadelphia v. New Jersey*, 437 U.S. 617, 624 (1978); (2) are non-discriminatory, but nonetheless place an undue burden on interstate commerce, *Pike v. Bruce Church*, 397 U.S. 137, 145 (1970); or (3) regulate extraterritorially, *Healy v. Beer Inst.*, 491 U.S. 324, 336–37 (1989). As the materials below suggest, applying these rules usually involves a fact-intensive inquiry about the purpose, structure, and effect of a given state law. This can make it difficult for states to predict whether their laws will withstand a Commerce Clause challenge.

A. Does the State Law Discriminate Against Out-of-State Commerce?

A law that discriminates facially or in effect almost always violates the dormant Commerce Clause. When a court identifies a state law as discriminatory, it will subject the law to strict scrutiny review. States then have a high burden to demonstrate their law serves a vital public interest they could not achieve through less discriminatory means. In most cases, this burden is too high to satisfy. Indeed, the Supreme Court has made clear that discriminatory laws are almost always per se invalid. Do you agree with the courts below that the laws at issue discriminated

against interstate commerce?

CITY OF PHILADELPHIA v. NEW JERSEY

437 U.S. 617 (1978)

A New Jersey law [ch. 363] prohibits the importation of most “solid or liquid waste which originated or was collected outside the territorial limits of the State. . . .” In this case we are required to decide whether this statutory prohibition violates the Commerce Clause of the United States Constitution.

I

The statutory provision in question . . . provides:

No person shall bring into this State any solid or liquid waste which originated or was collected outside the territorial limits of the State, except garbage to be fed to swine in the State of New Jersey, until the commissioner [of the State Department of Environmental Protection] shall determine that such action can be permitted without endangering the public health, safety and welfare and has promulgated regulations permitting and regulating the treatment and disposal of such waste in this State.

As authorized by ch. 363, the Commissioner promulgated regulations permitting four categories of waste to enter the State. [The regulations authorized imports of garbage to be fed to swine, materials intended for recycling, municipal solid waste intended to be used as a heat source, and hazardous waste imported for treatment or recovery but not disposal.] Apart from these narrow exceptions, however, New Jersey closed its borders to all waste from other States.

Immediately affected by these developments were the operators of private landfills in New Jersey, and several cities in other States that had agreements with these operators for waste disposal. They brought suit against New Jersey and its Department of Environmental Protection in state court, attacking the statute and regulations on a number of state and federal grounds. In an oral opinion granting the plaintiffs’ motion for summary judgment, the trial court declared the law unconstitutional because it discriminated against interstate commerce. The New Jersey Supreme Court . . . found that ch. 363 advanced vital health and environmental objectives with no economic discrimination against, and with little burden upon, interstate commerce, and that the law was therefore permissible under the Commerce Clause of the Constitution. * * *

III

A

Although the Constitution gives Congress the power to regulate commerce among the States, many subjects of potential federal regulation under that power inevitably escape congressional attention “because of their local character and their number and diversity.” In the absence of federal legislation, these subjects are open to control by the States so long as they act within the

restraints imposed by the Commerce Clause itself. The bounds of these restraints appear nowhere in the words of the Commerce Clause, but have emerged gradually in the decisions of this Court giving effect to its basic purpose. * * *

The opinions of the Court through the years have reflected an alertness to the evils of “economic isolation” and protectionism, while at the same time recognizing that incidental burdens on interstate commerce may be unavoidable when a State legislates to safeguard the health and safety of its people. Thus, where simple economic protectionism is effected by state legislation, a virtually *per se* rule of invalidity has been erected. The clearest example of such legislation is a law that overtly blocks the flow of interstate commerce at a State’s borders. But where other legislative objectives are credibly advanced and there is no patent discrimination against interstate trade, the Court has adopted a much more flexible approach, the general contours of which were outlined in *Pike v. Bruce Church, Inc.*, 397 U.S. 137, 142:

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. . . . If a legitimate local purpose is found, then the question becomes one of degree. And the extent of the burden that will be tolerated will of course depend on the nature of the local interest involved, and on whether it could be promoted as well with a lesser impact on interstate activities.

The crucial inquiry, therefore, must be directed to determining whether ch. 363 is basically a protectionist measure, or whether it can fairly be viewed as a law directed to legitimate local concerns, with effects upon interstate commerce that are only incidental.

B

The purpose of ch. 363 is set out in the statute itself as follows:

The Legislature finds and determines that . . . the volume of solid and liquid waste continues to rapidly increase, that the treatment and disposal of these wastes continues to pose an even greater threat to the quality of the environment of New Jersey, that the available and appropriate land fill sites within the State are being diminished, that the environment continues to be threatened by the treatment and disposal of waste which originated or was collected outside the State, and that the public health, safety and welfare require that the treatment and disposal within this State of all wastes generated outside of the State be prohibited.

The New Jersey Supreme Court accepted this statement of the state legislature’s purpose. The state court additionally found that New Jersey’s existing landfill sites will be exhausted within a few years; that to go on using these sites or to develop new ones will take a heavy environmental toll, both from pollution and from loss of scarce open lands; that new techniques to divert waste from landfills to other methods of disposal and resource recovery processes are under development, but that these changes will require time; and finally, that “the extension of

the lifespan of existing landfills, resulting from the exclusion of out-of-state waste, may be of crucial importance in preventing further virgin wetlands or other undeveloped lands from being devoted to landfill purposes.” Based on these findings, the court concluded that ch. 363 was designed to protect, not the State’s economy, but its environment, and that its substantial benefits outweigh its “slight” burden on interstate commerce.

The appellants strenuously contend that ch. 363, “while outwardly cloaked ‘in the currently fashionable garb of environmental protection,’ . . . is actually no more than a legislative effort to suppress competition and stabilize the cost of solid waste disposal for New Jersey residents. . . .” They cite passages of legislative history suggesting that the problem addressed by ch. 363 is primarily financial: Stemming the flow of out-of-state waste into certain landfill sites will extend their lives, thus delaying the day when New Jersey cities must transport their waste to more distant and expensive sites.

The appellees, on the other hand, deny that ch. 363 was motivated by financial concerns or economic protectionism. In the words of their brief, “[n]o New Jersey commercial interests stand to gain advantage over competitors from outside the state as a result of the ban on dumping out-of-state waste.” Noting that New Jersey landfill operators are among the plaintiffs, the appellee’s brief argues that “[t]he complaint is not that New Jersey has forged an economic preference for its own commercial interests, but rather that it has denied a small group of its entrepreneurs an economic opportunity to traffic in waste in order to protect the health, safety and welfare of the citizenry at large.”

This dispute about ultimate legislative purpose need not be resolved, because its resolution would not be relevant to the constitutional issue to be decided in this case. Contrary to the evident assumption of the state court and the parties, the evil of protectionism can reside in legislative means as well as legislative ends. Thus, it does not matter whether the ultimate aim of ch. 363 is to reduce the waste disposal costs of New Jersey residents or to save remaining open lands from pollution, for we assume New Jersey has every right to protect its residents’ pocketbooks as well as their environment. And it may be assumed as well that New Jersey may pursue those ends by slowing the flow of *all* waste into the State’s remaining landfills, even though interstate commerce may incidentally be affected. But whatever New Jersey’s ultimate purpose, it may not be accomplished by discriminating against articles of commerce coming from outside the State unless there is some reason, apart from their origin, to treat them differently. Both on its face and in its plain effect, ch. 363 violates this principle of nondiscrimination.

The Court has consistently found parochial legislation of this kind to be constitutionally invalid, whether the ultimate aim of the legislation was to assure a steady supply of milk by erecting barriers to allegedly ruinous outside competition, or to create jobs by keeping industry within the State, or to preserve the State’s financial resources from depletion by fencing out indigent immigrants. In each of these cases, a presumably legitimate goal was sought to be achieved by the illegitimate means of isolating the State from the national economy.

Also relevant here are the Court’s decisions holding that a State may not accord its own inhabitants a preferred right of access over consumers in other States to natural resources located

within its borders. These cases stand for the basic principle that a “State is without power to prevent privately owned articles of trade from being shipped and sold in interstate commerce on the ground that they are required to satisfy local demands or because they are needed by the people of the State.”

The New Jersey law at issue in this case falls squarely within the area that the Commerce Clause puts off limits to state regulation. On its face, it imposes on out-of-state commercial interests the full burden of conserving the State’s remaining landfill space. It is true that in our previous cases the scarce natural resource was itself the article of commerce, whereas here the scarce resource and the article of commerce are distinct. But that difference is without consequence. In both instances, the State has overtly moved to slow or freeze the flow of commerce for protectionist reasons. It does not matter that the State has shut the article of commerce inside the State in one case and outside the State in the other. What is crucial is the attempt by one State to isolate itself from a problem common to many by erecting a barrier against the movement of interstate trade.

ROCKY MOUNTAIN FARMERS UNION V. GOLDSTENE

843 F.Supp.2d 1071 (E.D. Cal. 2011)

LAWRENCE J. O’NEILL, District Judge.

INTRODUCTION

Plaintiffs Rocky Mountain Farmers Union ... and the Renewable Fuels Association (collectively “Plaintiffs” or “Rocky Mountain Plaintiffs”) seek summary judgment and an order enjoining enforcement of California’s Low Carbon Fuel Standard, (“LCFS”), regulations promulgated by defendant California Air Resource Board (“CARB”) to implement provisions of California Assembly Bill 32 (“AB 32”), California’s Global Warming Solutions Act of 2006, Cal. Health & Saf.Code, § 38500 et seq.

Rocky Mountain Plaintiffs argue that the LCFS violates the Commerce Clause, U.S. Const. art. I, § 8, cl. 3 and is preempted by federal law. In this summary judgment motion, the Rocky Mountain Plaintiffs argue that the LCFS fails as a matter of law because it: (1) impermissibly discriminates against out-of-state corn ethanol; (2) impermissibly regulates commerce and the channels of interstate commerce; (3) excessively burdens interstate commerce without producing local benefits * * *

Having considered the parties’ arguments, exhibits, and relevant case law, this Court finds that the LCFS impermissibly discriminates against out-of-state corn ethanol and impermissibly regulates extraterritorially in violation of the dormant Commerce Clause and its jurisprudence. Accordingly, the Rocky Mountain Plaintiffs’ summary judgment motion is GRANTED in part.

BACKGROUND * * *

LCFS

* * * 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.” The LCFS was “designed to reduce California’s dependence on petroleum” and “to stimulate and the production and use of alternative, low-carbon fuels in California.” In preparing the LCFS, CARB identified several “impacts” the regulation would have, including:

Biofuels will displace some percent of petroleum-based transportation fuels.
* * *

Reducing the volume of transportation fuels that are imported from other states will reduce foreign imports of oil into the U.S. * * *

The biorefineries to be built in the States will provide needed employment, an increased tax base for the States, and value added to the biomass used as feedstock. These benefits will be more important in rural areas of the State that are short on employment but rich in natural resources.

Displacing important transportation fuels with biofuels produced in the State keeps more money in the States.

CARB estimated that under the LCFS, “[u]p to eighteen cellulosic ethanol and six corn ethanol plants could be built [in California] by 2020 with a total annual capacity of 1.2 billion gallons.” “The estimated capital investment for these new businesses is approximately \$8.5 billion . . .” CARB estimates that the LCFS will reduce emissions from the transportation sector by about 16 million metric tons in 2020.

The LCFS regulates transportation fuels that are “sold, supplied, or offered for sale in California” and “any person, who as a regulated party . . . is responsible for a transportation fuel in a calendar year.” California’s LCFS focuses on the “carbon intensity” of fuels to estimate emissions related to a fuel’s lifecycle, including GHGs emitted when the fuel is extracted, refined, and transported to California. It establishes different standards for gasoline and diesel fuels, and provides for a gradual implementation of the fuel standards for both, with a goal to reduce the carbon intensity of fuel by 10% by the year 2020.

The LCFS requires providers to comply with reporting requirements which obligate them to identify for fuels sold or imported into California, the type of fuels, whether the fuel is blended, and the fuel’s production process. Providers are required to calculate the “carbon intensity” of each fuel component to determine their score, and must compare it with the statewide average carbon intensity level for that year. If a party’s score is below the statewide average level, the party may generate credits, provided it has obtain[ed] credit-generation approval by CARB. One obtains and maintains approval depending on how that party produces, ships, delivers and distributes its fuels from the location where the fuel is produced to where it ends up in California. If the party’s carbon intensity score is above the statewide average level, the party will generate deficits, which must be canceled either by retiring accumulated credits or purchasing credits

from others.

Reductions in the average carbon intensity were mandated to begin in 2011, with the reduction requirement increasing through the year 2020.

Carbon Intensity

“Carbon intensity is not an inherent chemical property of a fuel, but rather it is a reflective of the process in making, distributing, and using that fuel.” The “LCFS contains no requirements that dictate the exact composition of compliant transportation fuels.” . . .

A gallon of ethanol made from corn grown and processed in the Midwest will, under a microscope or other analytical device, look identical in every material way to a gallon of ethanol processed from sugar cane grown in Brazil. Both samples of ethanol will have the same boiling point, the same molecular composition, the same lower and upper limits of flammability — in other words, both will have identical physical and chemical properties because both products consist of 100% ethanol. On the other hand, corn ethanol from the Midwest will have different carbon intensity than the sugar cane ethanol from Brazil.

Carbon intensity is defined as “the amount of lifecycle greenhouse gas emissions, per unit of energy of fuel delivered, expressed in grams of carbon dioxide per megajoule. “Lifecycle greenhouse gas emissions” are defined as the:

aggregate quantity of greenhouse gas emissions (including direct emissions and significant indirect emissions such as significant emissions from land use changes), . . . related to the full fuel lifecycle, including all stages of fuel and feedstock production and distribution, from feedstock generation or extraction through the distribution and delivery and use of the finished fuel to the ultimate consumer. . . .

In short, carbon intensity is an estimate of emissions related to a fuel’s lifecycle that focuses on GHGs emitted when the transportation fuel is extracted, refined, and transported to California.

CARB — Assigned Corn Ethanol Carbon Intensity Values

The LCFS has assigned carbon intensity scores for gasoline and gasoline substitutes, embodied in the Table 6. . . . CARB, through Table 6, assigns different carbon intensity scores to different gasoline and gasoline substitutes, including gasoline, ethanol from corn, ethanol from sugar cane, compressed natural gas, liquefied natural gas, electricity, and hydrogen. These carbon intensity values set a 2010 baseline carbon intensity value to each of the fuels and pathways. Within the “ethanol from corn” section, more than a dozen “pathways” are identified, each assigned a carbon intensity value. Numerous distinctions are drawn among different categories of corn ethanol producers.

Plaintiffs argue that the LCFS discriminates against out-of-state ethanol producers on its

face, because the LCFS assigns more favorable carbon intensity values to California corn-derived ethanol than to Midwest corn-derived ethanol. * * *

Customized Carbon Intensity Values and Pathways

In addition to the default assigned values contained in Table 6, CARB provides two methods for a facility to apply for a customized total carbon intensity value. Under these mechanisms — named Method 2A and Method 2B in the LCFS — a facility may show that it has more efficient equipment or uses cleaner electricity to gain an individualized carbon intensity value. Under these methods, a facility may also propose its own pathway. “Producers whose energy use data are different from the values used in the development of the fuel pathways or producers whose process deviates substantially from that of the pathways represented in [Table 6] can propose their own pathways according to Methods 2A and 2B.”

CARB submits that to date, 44 Midwest corn ethanol facilities have registered for pathways in Table 6, with 25 indicating that they can produce ethanol lower than the 2010 baseline assigned in Table 6. Five Midwest corn ethanol facilities have applied under Method 2A and Method 2B, with a total of 22 pathways, all of which tentatively have been granted a rating lower than the value for the 2010 baseline for that pathway. * * *

DISCUSSION

I. Commerce Clause Challenges

The dormant Commerce Clause “directly limits the power of the States to discriminate against interstate commerce.” *Wyoming v. Oklahoma*, 502 U.S. 437, 454 (1992). “Discrimination simply means differential treatment of in-state and out-of-state economic interests that benefits the former and burdens the latter.” *United Haulers Ass’n v. Oneida–Herkimer Solid Waste Mgmt. Auth.*, 500 U.S. 330, 331 (2007). “The Commerce Clause . . . is in its negative aspect . . . a limitation on the regulatory authority of the states. Thus, although a state has power to regulate commercial matters of local concern, a state’s regulations violate the Commerce Clause if they are discriminatory in nature or impose an undue burden on interstate commerce.” *Shamrock Farms Co. v. Veneman*, 146 F.3d 1177, 1179 (9th Cir. 1998) * * *

B. Applicable Standard of Review

In reviewing a dormant Commerce Clause challenge, the Court must first consider the applicable standard of review. If a law discriminates against out-of-state entities, or attempts to regulate beyond a state’s jurisdiction, then the Court applies a strict scrutiny standard. *Healey v. Beer Inst.*, 491 U.S. 324, 336–37 (1989). If a law regulates in-state and out-of-state entities evenly and attempts to regulate only in-state activity, then the Court applies a balancing test. *Pike v. Bruce Church, Inc.*, 397 U.S. 137, 142 (1970). The strict scrutiny standard is difficult to satisfy, whereas the *Pike* balancing test is more favorable to the state law.

The Rocky Mountain Plaintiffs contend that the LCFS is subject to strict scrutiny analysis because it discriminates against out-of-state interests. A law or regulatory scheme “can

discriminate against out-of-state interests in three different ways: (1) facially; (2) purposefully, or (3) in practical effect.” The Rocky Mountain Plaintiffs argue that the LCFS discriminates in all three ways. The Rocky Mountain Plaintiffs assert that the LCFS: (1) facially discriminates because it assigns a higher carbon intensity score to corn-derived ethanol from the Midwest than it assigns to corn-derived ethanol from California; (2) practically discriminates because it purports to base carbon intensity scores on variables that are intertwined with origin (transportation and electricity); and (3) purposefully discriminates by closing California to Midwest corn ethanol while preserving a market for local corn ethanol. The Rocky Mountain Plaintiffs further argue that the LCFS impermissibly regulates out-of-state activity and is subject to strict scrutiny analysis. In the alternative, the Rocky Mountain Plaintiffs argue that the LCFS also fails the *Pike* analysis because it excessively burdens interstate commerce without producing local benefits.

Defendants counter that the strict scrutiny analysis is improper, because the LCFS is a neutral law that applies evenly to all fuel-providers within the state of California. Defendants further contend that Defendants’ arguments as to the burdens and effects of the LCFS are unripe and premature . . . Defendants submit that the Midwest ethanol industry is thriving, notwithstanding the LCFS and its application. Defendants suggest that there is no danger of future harm to the Midwest ethanol industry, because it is increasing its efficiency, diminishing its carbon footprint, and therefore, becoming more competitive in California. . . .

To determine the appropriate standard of review, the Court must first consider whether the LCFS overtly discriminates against interstate commerce or impermissibly regulates interstate commerce. If the answer is in the affirmative, then this Court shall address the remaining factors under the strict scrutiny analysis. If the Court finds that the LCFS is nondiscriminatory, then the Court shall address the *Pike* balancing factors to analyze the Rocky Mountain Plaintiffs’ dormant Commerce Clause challenge.

C. Strict Scrutiny Analysis

1. Whether the LCFS facially discriminates against interstate commerce

States may not “discriminate against an article of commerce by reason of its origin or destination out of State.” *C & A Carbone, Inc. v. Town of Clarkstown, N.Y.*, 511 U.S. 383 (1994). “The central rationale for the rule against discrimination is to prohibit state or municipal laws whose object is local economic protectionism.” A law is facially discriminatory when it “is not necessary to look beyond the text of this statute to determine that it discriminates against interstate commerce.” In this context “‘discrimination’ simply means differential treatment of in-state and out-of-state economic interests that benefits the former and burdens the latter.”

Relying on LCFS § 95486(b) and Table 6, Plaintiffs argue that the LCFS’ discriminatory treatment of physically and chemically identical fuels is reflected on the face of the LCFS. Plaintiffs point out that although corn ethanol produced in California and the Midwest have “identical physical and chemical properties,” Table 6 provides lower, more favorable carbon intensity scores for corn ethanol produced in California than corn ethanol produced in the Midwest. As reflected in the table, California corn-derived ethanol pathways are assigned 10%

lower carbon intensity score as compared to the Midwest counterpart pathways. Plaintiffs contend that this difference reflects “differential treatment of in-state and out-of-state economic interests that benefits the former and burdens the latter.” By assigning a higher carbon intensity score to the Midwest, the LCFS creates an “economic barrier against competition with the products of another state.”

Plaintiffs point out that the LCFS assigns higher carbon intensity values to corn ethanol “based on . . . [the] location of the production facility.” Plaintiffs contend that imposition of a higher carbon intensity score based on the “location of the production facility” constitutes express discrimination against Midwest corn-derived ethanol in favor of California corn ethanol. Moreover, Plaintiffs argue that CARB may not discriminate against out-of-state facilities based on transportation. In creating the LCFS, CARB acknowledged that “the carbon intensities of some California produced fuels . . . benefit from shorter transportation distances.” Plaintiffs argue, however, that CARB may not impose a barrier to interstate commerce based on the distance that the product must travel in interstate commerce.

Defendants maintain that the LCFS applies evenhandedly to all ethanol used as a fuel in California. Defendant[s] explain that all ethanol sold as fuel in California will receive a carbon intensity value based on its lifecycle GHG emissions analysis . . . Defendants explain that for all ethanol pathways, the carbon intensity value is determined by the application of the same scientific modeling tool (CA-GREET). Defendants conclude that because the LCFS applies the same emissions modeling tool and same regulatory mechanism to all ethanol pathways sold in California, regardless of origin, the LCFS is not discriminatory on its face.

Having considered the parties’ arguments, relevant case law, and admissible evidence, this Court finds that the LCFS and Table 6 explicitly differentiate among ethanol pathways based on origin (Midwest vs. California) and activities inextricably intertwined with origin (electricity provided by Midwest power companies vs. California power suppliers and interstate transportation). When comparing plants with the same feedstock and production process, the LCFS assigns a higher CI on the basis of origin alone. Although California applies the same CA-GREET formula to all pathways evenly, the variables within the formula favor California ethanol producers by assigning lower CI scores based on location. For at least four pathways identified on Table 6 that have identical production processes that create physically and chemically identical ethanol, the Lookup Table assigns a higher score to the ethanol produced in the Midwest and the lower score to the ethanol produced the same way in California. The following table, derived from Table 6, illustrates the comparison:

Fuel	Fuel Pathway	Assigned Total Carbon Intensity (g/CO₂ MJ)	Difference Between Carbon Intensities for Midwest and California Corn Ethanol(g/CO₂ MJ)
Corn Ethanol	1. Midwest; Dry Mill; Dry DGS; NG	98.40	9.50
	1a. California; Dry Mill; Dry DGS; NG	88.90	—

	2. Midwest; Dry Mill; Wet DGS; NG	90.10	9.40
	2a. California; Dry Mill; Wet DGS; NG	80.70	—
	3. Midwest; Dry Mill; Wet DGS; 80% NG; 20% Biomass	86.80	9.36
	3a. California; Dry Mill; Wet DGS; 80% NG; 20% Biomass	77.44	—

Plaintiffs point out that the LCFS assigns Midwest ethanol over 10% higher carbon intensity over its California ethanol counterpart. . . . The LCFS treats Midwest corn-derived ethanol differently than similar corn-derived ethanol made in California. In assigning higher CI scores based on, *inter alia*, the location of the production facility and the distance the product travels, scores that ultimately will affect the price of the product, this Court concludes that the LCFS discriminates against out-of-state corn-derived ethanol on its face.

CARB attributes the difference in carbon intensity values to multiple “scientific” factors that are not based on location. These factors include differences in GHG emissions in transportation and electricity sources. Moreover, CARB considers GHG emissions from California inherently lower than Midwest ethanol based on transportation of Midwest ethanol to California. CARB further assumes that California corn ethanol producers have better access to electricity produced from hydropower and nuclear power plants than Midwestern corn ethanol producers, will be at least as efficient as Midwestern producers in the use of comparable electricity sources, and will not use coal in their processes. While these factors may not overtly discriminate based on location, they do assign favorable assumptions to California while penalizing out-of-state competitors. California is attempting to stop leakage of GHG emissions by treating electricity generate[d] outside of the state differently than electricity generated inside its border. This discriminates against interstate commerce. Moreover, tying carbon intensity scores to the distance a good travels in interstate commerce discriminates against interstate commerce. *See* Tribe, 1 *Am. Constitutional Law* 1109 (3d ed. 2000) (Discrimination against an “activity which is essential for an out-of-state enterprise but not essential or a competing local business” is discrimination against interstate commerce.). In addition, the overtly favorable assumptions (although they may be true) related to the electricity powering the plants favors California producers and penalizes out-of-state competitors.

The Court concludes that the LCFS offends the Commerce Clause after considering the unique challenge presented. This is not the quintessential dormant Commerce Clause challenge. . . . [T]his Court appreciates that the carbon intensities of these two otherwise-identical products are different according to lifecycle analysis. Indeed, the point of the LCFS is to penalize the differences between the California and Midwest ethanol — the carbon emissions from the transportation, the different farming methods used, and the different types of electricity provided to and used by the plants — to reduce emissions. Although CARB’s goal to combat global warming may be “legitimate,” however, it cannot “be achieved by the illegitimate means of isolating the State from the national economy.” . . . Because of the transportation, electricity and other penalties assigned to Midwest corn ethanol will affect the price of the Midwest ethanol in the California market, the LCFS makes the higher CI corn-ethanol undesirable to purchase or

use. . . . Accordingly, the LCFS discriminates against out-of-state commerce and is subject to strict scrutiny analysis.

The LCFS facially discriminates against interstate commerce notwithstanding the fact that it may also benefit some out-of-state interests or burdensome in-state interests. * * *

Moreover, the Method 2A and Method 2B procedures in the LCFS do not alter this Court's conclusion that the LCFS discriminates on its face against out-of-state corn ethanol. Method 2A and Method 2B set forth administrative procedures through which a regulated party may seek to amend the LCFS Lookup Tables to add additional fuel pathways. It is no defense to describe methods that *might* allow amendment of the LCFS in a manner that *might* ameliorate the discriminatory impact of the regulation. Approval of the new pathways is solely within CARB's discretion. * * *

For the foregoing reasons, this Court finds that the LCFS impermissibly discriminates on its face against out-of-state entities. * * *

3. Whether the LCFS serves a legitimate local purpose

Once a state law is shown to discriminate against interstate commerce "either on its face or in practical effect," or to exercise extraterritorial control, the burden falls on the State to demonstrate *both* that the statute "serves a legitimate local purpose," *and* that this purpose could not be served as well by available nondiscriminatory means. * * *

Defendants argue that the LCFS serves the legitimate and local purpose to reduce the risks of global warming. Defendants' correctly point out that in *Massachusetts v. EPA*, 549 U.S. 497 (2007), the Supreme Court recognized that a state has a "well-founded desire to preserve its sovereign territory" from the threats of rising seas and other impacts of global warming. *Id.* at 519, 522. "That these climate-change risks are 'widely-shared' does not minimize [California's] interest" in reducing them. *Id.* at 522.

Significantly, in *Massachusetts v. EPA*, . . . the Court explained in dicta that a state has a local and legitimate interest in reducing global warming. Based on this authority, this Court finds that the LCFS serves a local and legitimate interest.

4. Whether that purpose could be served through other nondiscriminatory means

The final consideration in the strict scrutiny analysis is whether California has established that the goal of reducing global warming cannot be adequately served by nondiscriminatory alternatives. California has failed to establish this fact. While this Court recognizes that the lifecycle analysis is a widely-accepted approach nationally and internationally to reduce GHG emissions, Defendants have failed to establish that they could not achieve this goal through other nondiscriminatory means. The Rocky Mountain Plaintiffs suggest several nondiscriminatory alternatives. For example, an LCFS that does not contain the discriminatory components may be effective in reducing GHG emissions. In addition, Defendants' expert concedes that California could "adopt a tax on fossil fuels" to "reduce greenhouse gas emissions associated with

California's transportation sector." . . . Although these approaches may be less desirable, for a number of reasons, Defendants have failed to establish there are no nondiscriminatory means by which California could serve its purpose.

QUESTIONS AND DISCUSSION

1. Is Rocky Mountain Farmers' Union Correct? The court found California's LCFS facially discriminatory because it assigned Midwestern ethanol a higher carbon intensity value than other ethanol, due, in part to the transportation emissions and the type of fuel used to produce the ethanol. Is this really discriminatory, though, if the facts show the Midwestern ethanol is more carbon-intensive? Would the LCFS have survived judicial review if California had not organized the tables but instead required each ethanol producer to prepare a case-specific carbon intensity estimate?

2. The Implications for Climate Mitigation. What are the implications of *Rocky Mountain Farmers' Union* for climate change mitigation? Other climate policies may make distance a relevant factor in calculating carbon intensity. Any carbon intensity calculation involving transportation certainly would. This does not mean that products transported further distances would always have a higher carbon intensity, however. For example, Brazilian sugarcane is usually less carbon-intensive than Iowa ethanol, even with transportation emissions included. Should that favor a finding that a law like the LCFS does not discriminate? How should courts treat state policies that aim to improve efficiency in the electric sector? Transmission lines waste on average 10 percent of the power they deliver, but line losses depend, in part, on the distance the power travels. Would a state violate the Commerce Clause if it rewarded more efficient (and thus closer) transmission?

3. The Easy Cases. In some cases, states have clearly passed discriminatory climate change mitigation policies. For example, some states require a specified amount of renewable power to come from in-state sources under state RPSs. States also may award in-state renewable power extra renewable energy credits (RECs), basically allowing in-state power to have greater economic value than out-of-state sources. Presuming a court were to find these policies discriminatory, could a state nonetheless justify it under strict scrutiny review?

B. Does the State Law Unduly Burden Interstate Commerce?

If a state law survives a challenge that it discriminates, courts then apply a balancing test to determine if the law is Constitutional. In *Pike v. Bruce Church*, the Supreme Court explained the test:

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. . . . If a legitimate local purpose is found, then the question becomes one of degree. And the extent of the burden that will be

tolerated will of course depend on the nature of the local interest involved, and on whether it could be promoted as well with a lesser impact on interstate activities.

397 U.S. at 142. Challenges brought under the *Pike* test are fact-intensive, and they usually go in the state's favor. Consider the following challenge to California's emissions performance standard:

**RE: INTEGRATION OF GREENHOUSE GAS EMISSIONS STANDARDS
INTO PROCUREMENT POLICIES**

Rulemaking Proceeding 06-04-009

Decision 07-01-039

(Cal. Pub. Util. Comm'n, Jan. 25, 2007)

**INTERIM OPINION ON PHASE 1 ISSUES: GREENHOUSE GAS EMISSIONS
PERFORMANCE STANDARD**

BY THE COMMISSION:

1. Introduction and Summary

Today, we adopt an interim greenhouse gas (GHG) emissions performance standard for new long-term financial commitments to baseload generation undertaken by all load-serving entities (LSEs), consistent with the requirements and definitions of Senate Bill (SB) 1368 (Stats. 2006, ch. 598). Our adopted emissions performance standard or 'EPS' is intended to serve as a near-term bridge until an enforceable GHG emissions limit applicable to LSEs is established and in operation. * * *

SB 1368 establishes a minimum performance requirement for any long-term financial commitment for baseload generation that will be supplying power to California ratepayers. The new law establishes that the GHG emissions rates for these facilities must be no higher than the GHG emissions rate of a combined-cycle gas turbine (CCGT) powerplant.

An EPS is needed to reduce California's financial risk exposure to the compliance costs associated with future GHG emissions (state and federal) and associated future reliability problems in electricity supplies. Put another way, it is needed to ensure that there is no 'backsliding' as California transitions to a statewide GHG emissions cap: If LSEs enter into long-term commitments with high-GHG emitting baseload plants during this transition, California ratepayers will be exposed to the high cost of retrofits (or potentially the need to purchase expensive offsets) under future emission control regulations. They will also be exposed to potential supply disruptions when these high-emitting facilities are taken off line for retrofits, or retired early, in order to comply with future regulations. A facility-based GHG emissions performance standard protects California ratepayers from these backsliding risks and costs during the transition to a load-based GHG emissions cap. As directed by SB 1368, we have considered the effects on system reliability and overall costs to electricity customers in developing an EPS that will achieve these objectives. * * *

8. Commerce Clause Issues * * *

8.2. *Pike* Balancing Test

When a state enactment is not facially discriminatory, the *Pike* balancing test is generally applied. In *Pike v. Bruce Church* (1970) 397 U.S. 137, the Supreme Court established this test that weighs the local benefits against the burdens on interstate commerce, in order to determine if a particular state regulation violates the dormant Commerce Clause. A regulation's burdens on interstate commerce must be 'clearly excessive' in relation to the local benefits in order for a regulation to be struck down under *Pike*. As Environmental Defense points out, the burden of proving 'excessiveness' would fall on a party challenging a regulation.

8.2.1. The EPS has Substantial Local Benefits

Despite the restrictions of the dormant Commerce Clause, a state retains general police powers to regulate legitimate local concerns. In SB 1368, the Legislature has made specific legislative findings regarding the local benefits of the EPS. SB 1368 reads: '[g]lobal warming will have serious adverse consequences on the economy, health and environment of California.'

Regarding economic benefits, the Legislature found that 'federal regulation of emissions of greenhouse gases is likely' 'over the next decade' and that SB 1368 serves to 'reduce potential exposure of California customers for future pollution-control costs.' SB 1368 also reduces 'potential exposure of California consumers to future reliability problems in electricity supplies.' Thus, the EPS serves to protect ratepayers from the costs and risks of complying with future laws and regulations that will further limit the emission of GHG gases in the process of generating electricity. If Californians are reliant on high-GHG emitting sources, whether in-state or out-of-state, future regulations could have a devastating impact on the California economy. * * *

Regarding the health and environment of California, we look to the legislative findings of AB 32 . . .

In AB 32, the Legislature found that:

'(a) Global warming poses a serious threat to the economic wellbeing, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.'

GHG emissions contribute to climate change. By increasing the number of extremely hot days, and the 'frequency, duration, and intensity of conditions conducive to air pollution formation, oppressive heat, and wildfires,' the public health of Californians could be dramatically affected. Climate change is also likely to increase infectious disease vectors * * *

The decreases to the Sierra Nevada snowpack mentioned in AB 32 would have far-reaching effects on California's water supply. The snowpack provides a natural water supply to Californians, including agricultural growers. Loss of the snowpack would result in decreased runoff, which would reduce the availability of the already overstretched water supply. Electric supply from hydroelectric powerplants is also likely to diminish, while demand continues to rise. The rise in sea level described in AB 32 could submerge many of California's beaches and estuaries. The occurrences of extreme oceanic events are also expected to rise with sea levels.

. . . We thus conclude that the EPS has substantial local benefits.

8.2.2. The EPS does not Excessively Burden Interstate Commerce

As noted above, CEED argues that the EPS will burden interstate commerce because it would somehow limit the construction of new coal-fueled plants and because clean coal technology is not commercially feasible. . . . The EPS would affect electric generators that are high-GHG emitters and seek to enter into new long-term baseload contracts with California LSEs. However, this would only affect those generation companies to the extent they also refuse to refurbish their power plants, or build new power plants, with technology that limits GHG emissions such that they comply with the EPS. Beyond this very specific class, out-of-state generators would generally be able to meet the EPS. The overall interstate market is not being overly burdened.

More generally, CEED argues that: 'the reality of California's energy market dictates that the [EPS] will primarily preclude out-of-state suppliers from competing in California markets' and that the EPS burdens the economies of other states more than California. CEED further argues that through coal displacement, various interstate geographic regions of the United States would be negatively impacted in the future.

CEED presents a report by 'Energy Ventures Analysis, Inc.' (EVA) which states that: '[b]aseload power imported from the Southwest would be far harder hit than generation from the Pacific Northwest. Both major importing areas would be hit much harder than in-state California plants.' The report speculates that 8–52% of the existing Pacific Northwest imports would not meet the EPS, and that 54–86% of the existing Southwest imports would not meet the EPS. However, assuming *arguendo* these numbers were accurate, as much as 92% of the existing Pacific Northwest imports would meet the EPS, and as much as 46% of the existing Southwest imports would meet the EPS. Moreover, generators may make changes to existing generation plants or construct new out-of-state generation plants, in order to meet the EPS. * * *

Overall, the argument CEED raises is analogous to a failed argument in *Minnesota v. Clover Leaf Creamery* (1981) 449 U.S. 456. In *Clover Leaf Creamery*, the Court upheld a Minnesota statute that banned the retail sale of milk in plastic nonreturnable, nonrefillable containers, but allowed such sale in other types of nonreturnable, nonrefillable containers. The opponents of the statute argued that the 'plastic resin . . . used for making plastic nonreturnable milk jugs, is produced entirely by non-Minnesota firms, while pulpwood, used for making paperboard, is a major Minnesota product.' The Supreme Court responded: '[e]ven granting that the out-of-state plastics industry is burdened relatively more heavily than the Minnesota pulpwood industry, we

find that this burden is not ‘clearly excessive’ in light of the substantial state interest in promoting conservation of energy and other natural resources.’

As in *Clover Leaf Creamery*, the burdens cited by CEED cannot be deemed ‘clearly excessive’ in light of the substantial local benefits of the EPS. * * *

For all the reasons stated above, we conclude that the alleged burdens are incidental and not clearly excessive in relation to the substantial local benefits of the EPS.

QUESTIONS AND DISCUSSION

1. *Undue Burden.* Do you agree with the California Public Utility Commission’s (CPUC’s) conclusions that the EPS does not place an undue burden on interstate commerce? As a result of energy deregulation and increased transmission capacity, as well as stringent California air pollution controls, more than 90 percent of California’s coal-derived electricity comes from out of state. In contrast, more than 85 percent of California’s natural-gas derived electricity originates in California. See CALIFORNIA ENERGY COMMISSION, CALIFORNIA ENERGY ALMANAC, TOTAL ELECTRICITY SYSTEM POWER (2007). The EPS requires all electricity generation to achieve emissions rates achieved by combined-cycle natural gas plants. Combined-cycle natural gas plant emission rates are nearly one-third of the typical emissions rates of pulverized coal plants and one-half the emissions rates of integrated gasification combined-coal (IGCC) plants. Thus, the law seems to strongly favor natural gas generators (more than 85 percent of which are located in California) and strongly disfavor coal-based electricity (more than 90 percent of which comes from out-of-state). Why, then, did the CPUC conclude that the law does not unduly burden interstate commerce?

In part, the CPUC’s opinion seems to turn on the potential development of carbon capture and storage technologies to reduce greenhouse gas emissions from coal plants. Yet, as noted in Chapter 15, efforts to develop “clean coal” facilities appear to have stalled. Does this mean that the CPUC erred in finding that the EPS did not unduly burden interstate commerce? Why or why not?

2. *Alternatives to the Emissions Performance Standards.* Could the CPUC have enacted a regulation that would have less impact on interstate commerce? One of the reasons the CPUC applied the EPS to procurement contracts was to prevent “leakage” that would result if the CPUC established emissions requirements only on generators. The CPUC feared that regulation of in-state generation only would allow utilities to increase their imports of cheaper coal-derived electricity from other states and thus negate any greenhouse gas reductions achieved through in-state regulation. Indeed, at the time CPUC was developing the EPS regulations, six southern California cities were negotiating long-term contracts with coal-fired power generators in Utah. See Patricia Weisselberg, *Shaping the Energy Future in the American West: Can California Curb Greenhouse Gas Emissions from Out-of-State, Coal-Fired Power Plants Without Violating the Dormant Commerce Clause?*, 42 U.S.F. L. REV. 185, 200–202 (2007). The cities ultimately abandoned the contract negotiations due to concerns about climate change and the pending

regulations. Does this suggest that the application of the EPS to procurement contracts is a necessary means to limit greenhouse gas emissions?

3. Local Interests. Under the *Pike* test, courts will balance the state's interest in regulating with the burden imposed on interstate commerce. The stronger the state interest, the less likely it is that a court will strike down a law, even if the law does burden interstate commerce. In the context of climate change, of course, the issue is whether a state's interest in reducing greenhouse gas emissions can ever truly be considered a "local" interest. How did the CPUC resolve this aspect of the challenge?

4. Is California's EPS Discriminatory? In most cases where the Court has found a law discriminatory, the law imposed a burden on out-of-state commerce without placing the same burden on in-state interests. *Minnesota v. Clover Leaf Creamery*, 449 U.S. 456, 472 (1981) (summarizing cases). If, however, a law applies to both in-state and out-of-state entities, the Court will generally not find that law discriminatory even if the out-of-state entities may face greater hardships in complying with the law.

Relying in part on this, the PUC concluded the law did not discriminate against interstate commerce:

The EPS is distinguishable from the statute in *City of Philadelphia* for two reasons. First, the statute in *City of Philadelphia* prevented certain products from entering New Jersey. Under the EPS, electricity generated from high-GHG emitters can still be sold to California LSEs under existing contracts, or under new or renewal contracts of less than five years. In addition, coal-fired and other plants that use technology that reduces GHG emissions could meet the EPS.

More importantly, the EPS does not discriminate based on geographic origin. . . . An LSE is free to enter into long-term contracts with both in-state and out-of-state generators because the EPS makes no distinctions between in-state and out-of-state sources of electricity.

CEED further argues that the EPS 'places heightened financial burdens on the construction of new coal-fueled power plants in neighboring states.' This is based on the practice of using pre-construction contracts to secure financing for powerplant construction. CEED further argues that the EPS therefore provides California firms with a 'significant competitive advantage' in securing financing.

The dormant Commerce Clause does not require California to protect the pecuniary interests of out-of-state coal burners. Moreover, CEED's argument does not show that California firms will have a significant competitive advantage. As stated above, both California firms and out-of-state firms are covered under the EPS. The Supreme Court has observed that the Commerce Clause 'protects the interstate market, not particular interstate firms, from prohibitive or burdensome regulations.'

Integration of Greenhouse Gas Emissions, at 206–11. Did the PUC decide this issue correctly?

C. Does the State Law Regulate Extraterritorially?

The Supreme Court has also invalidated laws that amounted to extraterritorial regulation, *Healy*, 491 U.S. 324, but it has been careful to limit the breadth of the doctrine. In *Healy*, the Supreme Court invalidated a Connecticut law requiring beer wholesalers to affirm that the prices they charged in Connecticut were no higher than the prices they charged in other states. *Id.* at 336. This type of price affirmation, the Court said, “prevent[ed] brewers from undertaking competitive pricing in Massachusetts based on prevailing market conditions,” and thus allowed Connecticut to set the prices for beer in other out-of-state markets. *Id.* at 338. Is California’s LCFS analogous to the price-setting the Court rejected in *Healy*?

ROCKY MOUNTAIN FARMERS UNION V. GOLDSTENE 843 F.Supp.2d 1071 (E.D. Cal. 2011)

2. Whether the LCFS Controls Extraterritorial Conduct

As an alternative argument, the Rocky Mountain Plaintiffs contend that strict scrutiny also applies to the LCFS if it attempts to “control conduct beyond the boundary of the state.” *Healy v. Beer Inst.*, 491 U.S. 324, 336–37 (1989). Under this doctrine, the “Commerce Clause . . . precludes the application of a state statute to commerce that takes place wholly outside of the State’s borders, whether or not the commerce has effects within the State.” The Commerce Clause also forbids a state “statute that directly controls commerce occurring wholly outside the boundaries of a State” as that statute “exceeds the inherent limits of the enacting State’s authority and is invalid regardless of whether the statute’s extraterritorial reach was intended by the legislature.” *Healy*, 491 U.S. at 336. “The critical inquiry is whether the practical effect of the regulation is to control conduct beyond the boundaries of the State.” *Id.* This Court evaluates the practical effect of the statute “not only by considering the consequences of the statute itself, but also by considering how the challenged statute 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 legislation.” *Id.* “Generally speaking, the Commerce Clause protects against inconsistent legislation arising from the projection of one state regulatory regime into the jurisdiction of another State.” *Id.*

The Rocky Mountain Plaintiffs argue that the LCFS controls conduct that occurs wholly outside of California. The Rocky Mountain Plaintiffs point out that most of the production of corn ethanol occurs entirely outside of California. In addition, that production has no impact on the chemical or physical properties of the corn ethanol ultimately used in California or the tailpipe emissions of motor vehicles that will use the ethanol in California. The Rocky Mountain Plaintiffs contend that, in addition to regulating emissions in California, the ambitious LCFS calibrates CI scores so that they regulate, among other things, deforestation in South America, how Midwest farmers use their land, and how ethanol plants in the Midwest produce animal nutrients. The Rocky Mountain Plaintiffs contend that the LCFS not only regulates the out-of-state production processes for corn ethanol imported into California, but it goes beyond by

penalizing corn ethanol producers for their entirely separate business decision to dry distillers grains co-products after the ethanol is produced. Moreover, CARB imposes a substantial penalty — more than 30% of the CI score for corn ethanol — for “indirect land use.” That penalty is used to discourage farmers around the world from converting nonagricultural land into farmland to enter the corn market.

Defendants argue that the Rocky Mountain Plaintiffs rely on the mistaken assertion that the LCFS is “regulating” the activities that it takes into consideration to determine CI values. Defendants explain that the LCFS creates a market-based system which includes a yearly average performance standard and the availability of trading for credits and debits. In-state and out-of-state producers with higher CI values are not required to reduce CI values or to make changes in production or distribution in order to sell their ethanol in California. Nor are regulated parties prevented from purchasing fuels with higher CI values. Based on this system, Defendants submit, any out-of-state effects are indirect, rather than direct regulations. Moreover, Defendants argue that the Commerce Clause protects the ethanol market, not individual particular interstate firms. Defendants admit that the LCFS structure will shift the market by weakening the position of the higher-CI producers relative to lower-CI producers causing some higher-CI producers . . . to withdraw from the California market. Defendants maintain, however, that these market forces do not regulate commerce outside of California’s boundaries.

Ostensibly, the LCFS regulates only fuel-providers in California. This fact, however, does not resolve the issue. Defendants’ arguments improperly focus on whether or not the LCFS directly regulates the out-of-state entities. As set forth above, the “critical inquiry is whether the practical effect of the regulation is to control conduct beyond the boundaries of the State.” *Healy*, 491 U.S. at 336. By using the lifecycle analysis approach to reducing GHG emissions, California is attempting to account for — and reduce — emissions from the entire pathway. Differences in CI scores are based on CARB’s assessment of Midwest states “[f]arming practices (e.g. frequency and type of fertilizer used); [c]rop yields; [h]arvesting practices; [and] [c]ollection and transportation of the crop.” In addition, the LCFS includes a “land use change” component, with higher scores given to the Midwest and Brazil. According to CARB, the LCFS assigns carbon intensity based on these activities to provide an “incentive for regulated parties to adopt production methods which result in lower emissions.” Defendants cannot dispute that the “practical effect” of the regulation would be to control this conduct — occurring wholly outside of California. Indeed, the aim of the LCFS is to change these practices to reduce GHG emissions. But in penalizing these practices to “incentive regulated parties to change” their conduct (including conduct occurring wholly outside of the state), the LCFS impermissibly attempts to “control conduct beyond the boundary of the state.” * * *

QUESTIONS AND DISCUSSION

1. *Did Rocky Mountain Farmers’ Union Reach the Right Result?* In cases where the Supreme Court has found a state to have regulated extraterritorially, the state’s intrusion into another state’s regulatory authority was much more extreme. In *Healy*, for example, the law effectively prohibited the wholesalers from engaging in a competitive market in other states. Does the LCFS have the same effect, or does it instead simply set the conditions under which

ethanol producers can sell their fuel at the best prices in California? Is California regulating other markets, or is it simply regulating its own? For one perspective on the case, see Robert L. Molinelli, *Renewable Energy Development: Surviving the Dormant Commerce Clause*, ABA SEER RENEWABLE, ALTERNATIVE, AND DISTRIBUTED ENERGY RESOURCES COMMITTEE NEWSLETTER 4 (Sept. 2012).

2. What are the Implications? If the Court of Appeals upholds the district court's decision, how would that affect state climate policy? Could states no longer consider, for example, the carbon intensity of fuels based on their manufacturing emissions? Would this matter?

IV. THE FUTURE ROLE OF STATE AND LOCAL GOVERNMENTS

In 2009, when the first edition of this book was published, many scholars questioned the seriousness and value of sub-federal climate change mitigation actions. Many people thought states had enacted laws primarily to place pressure on the federal government to pass its own preemptive comprehensive law. They also questioned whether a piecemeal approach to climate change mitigation could work.

Since then, state and local laws have expanded and matured. Sub-federal governments are now on their second or third iteration of some policies, such as RGGI, or Portland's local climate action plan. These laws now regulate a significant portion of the U.S. greenhouse gas emitters and play a particularly important role in demand-side regulation. Local climate action plans certainly serve that purpose, but so do transportation and energy efficient policies explored in other chapters. Indeed, when one considers the transportation, energy, and building sectors, it becomes clear how sub-federal governments have long played a critical role in regulating fuel choices, land use planning, and building design. Is it so surprising that they would continue to play this role in climate change mitigation?

While sub-federal regulation has become a significant component of climate change law, no one can predict whether it will remain one. Regulated entities have continued to call for comprehensive federal climate legislation that would preempt state and local laws. Courts have also demonstrated some willingness to constrain sub-federal regulation. It will likely take many more years before we have a better understanding of the role state and local actors will play.