

Litigating Global Warming: Likely Legal Challenges to Emerging Greenhouse Gas Cap-and-Trade Programs in the United States

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Editors' Summary

Regulating greenhouse gas emissions through cap-and-trade programs appears inevitable in the United States and conflicts among stakeholders are likely to result in new litigation. The European Union Emission Trading Scheme and U.S. Acid Rain Program can be examined as exemplars to identify the stakeholders of a cap-and-trade program and the types of conflicts that are likely to emerge. Several categories of litigation are likely to develop following the enactment of federal cap-and-trade legislation, including challenges to the program, challenges to competing state and regional programs, actions enforcing the federal program, and related civil litigation among stakeholders.

With increasing political discourse over global warming, cap-and-trade programs to regulate greenhouse gases (GHGs) appear inevitable in the United States. In President Barack Obama's first speech to a joint session of the U.S. Congress, he asked Congress to send him "legislation that places a market-based cap on carbon pollution," dramatically increasing the chances of passing in 2009 a federal cap-and-trade program. Indeed, despite the onset of a deep economic recession, the Obama Administration has indicated that if Congress does not pass new GHG legislation, it is likely that the president will push to regulate GHG emissions under the Clean Air Act (CAA)¹ via the U.S. Environmental Protection Agency's (EPA's) rulemaking authority.²

Should Congress choose to legislate on global warming this year, it will not be acting on a blank canvas. There are already a number of regional and state cap-and-trade programs underway. Ten northeast and mid-Atlantic states are participating in the Northeast Regional Greenhouse Gas Initiative (RGGI), which intends to use a cap-and-trade program to reduce the overall level of carbon dioxide (CO₂) emissions from power plants in the participating states by 10% by 2018. The first auction of RGGI emission allowances was held on September 25, 2008. According to Potomac Economics, which was retained to serve as the market monitor for RGGI, the auction was "robust with 59 separate entities submitting bids to purchase more than four times the available supply of allowances in the auction."³

In the West, seven states, including California, and four Canadian provinces have been working since February 2007, to develop a regional cap-and-trade program, known as the Western Climate Initiative (WCI), to reduce emissions from six GHGs. Three of the WCI members (California, Quebec, and Washington) have adopted regulatory threshold guidelines. And with passage of AB 32: The Global Warming Solution Act of 2006 (AB 32),⁴ California became the first state to mandate reductions in GHG emissions. AB 32 requires California to reduce GHG emissions to 1990 levels by 2020—a reduction of about 30%. In response to AB 32, California is

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1. 42 U.S.C. §§7401-7671q, ELR STAT. CAA §§101-618.
2. See Darren Samuelsohn, *Obama Prefers Congress to EPA in Tackling Climate*—Browner, N.Y. TIMES, Feb. 23, 2009, <http://www.nytimes.com/cwire/2009/02/23/23climatewire-obama-prefers-congress-to-epa-when-it-comes-t-9800.html>.
3. Memorandum from David Patton and Pallas Lee VanSchaick, Potomac Economics, to RGGI, Inc. and RGGI Participating States 1 (Oct. 16, 2008) [hereinafter Potomac Economics Memorandum] http://www.rggi.org/docs/Auction_1_PostSettlement_Report_from_Market_Monitor.pdf.
4. CAL. HEALTH & SAFETY CODE §§38501-38599 (West 2006).

developing its own cap-and-trade program that is designed to dovetail with WCI.

In the Midwest, six states and one Canadian province have agreed to develop a multisector cap-and-trade system similar to WCI. Under the Midwest Greenhouse Gas Reduction Accord (MGGRA), participants are currently in the process of setting targets and time frames, which will likely be emission reductions of all six GHGs by 15 to 25% below 2005 levels by 2020 and 60 to 80% by 2050.

The complexity of these emerging and potentially overlapping programs is likely to generate a wide variety of new litigation. The act of putting a price on an activity that previously was free (the emission of GHGs) inevitably will cause conflicts and disagreements. The stakes are extremely high since the emission of GHGs, an activity that is directly tied to energy usage, affects every industry and business in the United States.

In this Article, we look at some likely challenges to, and litigation from, the emerging GHG cap-and-trade programs. We look first to litigation that arose after the establishment of two recent cap-and-trade programs, the European Union Emission Trading Scheme (EU-ETS) and the U.S. Acid Rain Program, as anecdotal examples of the types of conflicts that U.S. GHG cap-and-trade schemes are likely to generate. We then consider what litigation can be expected in direct response to GHG legislation and the resulting regulatory structure. Finally, we consider ancillary litigation relating to climate change more generally, which may be spurred on as a result of passage of a federal climate change law.

I. Preliminary Issues Implicated in Regulating GHGs

Not every cap-and-trade program is the same and cap-and-trade is not the only way to regulate GHGs. Before getting into details about the various cap-and-trade programs under consideration and development, it is useful to take a step back to understand some of the meta-issues underlying climate change legislation, such as: (1) how to regulate GHGs; (2) whom and how much to regulate; and (3) what to regulate? In this section, we discuss these larger issues.

A. How to Regulate?

Most U.S. environmental law is a form of direct regulation that sets limits on how much an entity can emit, release, or discharge of a particular substance. Under this approach, a centralized agency, usually EPA (or a state's equivalent), sets limits for certain pollutants, generally through a permitting process.⁵ Fines are imposed for exceeding the set limits. Such a command-and-control system could be used to regulate GHGs.⁶ Indeed, the stage was set for that to happen when the

5. See, e.g., 42 U.S.C. §7661c (2006) (Title V permits for air pollutants under the CAA).

6. An alternative form of direct regulation that has been suggested for regulating GHGs is the use of a direct tax. Many economists have suggested that a direct tax is the most efficient and effective way to reduce emissions. Phil Izzo, *Is It Time for a New Tax on Energy? Economists Say Government Should Foster Alternatives—But Not How Bush Proposes*, WALL ST. J., Feb. 9, 2007, at A6, available at

U.S. Supreme Court held in *Massachusetts v. EPA* that EPA is obligated under the CAA to prescribe GHG emissions standards for new motor vehicles because GHGs fall under the Act's definition of "air pollutant."⁷

In response to the *Massachusetts* decision, EPA issued an Advance Notice of Proposed Rulemaking (ANPR).⁸ The ANPR, which contains pages and pages of internal Agency deliberations and comments, discusses at length the suitability of regulating GHGs and invites comments on options and questions to be considered for possible GHG regulations under the CAA. In it, EPA at that time made clear that it is not an advocate of regulating GHGs under the CAA, stating:

[T]he Clean Air Act, an outdated law originally enacted to control regional pollutants that cause direct health effects, is ill-suited for the task of regulating global greenhouse gases. Based on the analysis to date, pursuing this course of action would inevitably result in a very complicated, time-consuming and, likely, convoluted set of regulations.⁹

Under the Obama Administration, EPA has taken a more aggressive stand toward regulating GHGs. On April 17, 2009, EPA issued a proposed rule that declares that GHGs endanger public health and welfare, laying the groundwork for regulating GHGs under the CAA.¹⁰ Regulating GHGs through the existing CAA thus remains an open option. The momentum, however, for regulating GHGs has been toward the creation of a new regulatory framework, using an emissions trading scheme, which is often referred to as a cap-and-trade program.¹¹ This is the preferred method of the Obama Administration.¹² Proponents of new, comprehensive legislation argue that relying primarily on market-driven mechanisms to reduce GHG emissions would enable emitters to choose the

<http://online.wsj.com/article/SB117086898234001121-search.html>. This option, however, has been largely discounted as being politically unviable in the United States, although it has recently been revived as a potential alternative in light of the economic crisis. See *infra* note 27.

7. 549 U.S. 497, 528-32, 37 ELR 20075 (2007).

8. Regulating Greenhouse Gas Emissions Under the Clean Air Act, 73 Fed. Reg. 44354 (proposed July 30, 2008) (to be codified at 40 C.F.R. Chapter I) [hereinafter ANPR], available at <http://www.epa.gov/fedrgstr/EPA-AIR/2008/July/Day-30>.

9. *Id.* at 44355. There has been a great deal of controversy over EPA's actions in response to the *Massachusetts* decision, which we do not get into in this Article.

10. U.S. EPA, Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases Under the Clean Air Act, <http://epa.gov/climatechange/endangerment.html>. EPA's proposed findings will be published in the *Federal Register* and made available at <http://www.regulations.gov> (Docket ID No. EPA-HQ-OAR-2009-0171).

11. Both forms of regulation, i.e., an emissions trading scheme or more traditional regulation under the CAA, are likely to be complemented with indirect controls, such as efficiency standards for appliances, further changes to the Corporate Average Fuel Economy (CAFE) standards, or requiring energy-efficient materials to be used in new construction.

There is another form of emissions trading, known as "baseline and credit," which allows firms to earn emission reduction credits for emitting less than their baseline, which can in turn be sold to regulated entities that fail to meet their permitted emissions. The baseline is usually derived from existing regulations, e.g., Title V permits under the CAA, and is often activity-based. See Donald N. DeWees, *Emissions Trading: ERCs or Allowances?* 2 (2000) (Univ. of Toronto Dep't of Econ., Working Paper No. 00-01), <http://www.chass.utoronto.ca/ecipa/archive/UT-ECIPA-DEWEES-00-01.pdf>. Because a cap-and-trade program to regulate GHGs is more politically viable, baseline and credit schemes are not discussed in this Article.

12. Samuelsohn, *supra* note 2.

most cost-effective ways to address GHGs with the least harm to the economy. A white paper on climate change legislation design, which was prepared by the House of Representatives Committee on Energy and Commerce and its Subcommittee on Energy and Air Quality, for example, states:

The decision to have a cap-and-trade regulatory program as the cornerstone of a mandatory climate change program is driven in large part by the ability of such a program to reduce greenhouse gas emissions to a specified level at the lowest possible overall cost to society and to lower the cost for regulated entities. As compared to more traditional forms of regulation, a well-designed cap-and-trade program generally should achieve the same environmental results at a lower cost because it provides flexibility to emitters, creates incentives for sources to use low-cost compliance strategies, and provides incentives for technological advances.¹³

In response to the ANPR, various federal agencies have demonstrated support for the creation of a new regulatory framework using a cap-and-trade program.

Under a cap-and-trade program, a central agency sets a cap on the total amount of the regulated substance, such as CO₂, that is allowed to be emitted during a reporting period. Allowances (essentially permits to emit a specific amount of the regulated substance) are distributed, either freely, by auction, or a combination of the two, to the covered emitters. The total amount of allowances cannot exceed the cap.

At the end of the reporting period, the regulated emitters must surrender allowances equal to the amount of tonnage they emitted. If they are unable to do so, they are penalized. To avoid that situation, the regulated emitters who think their emissions will be higher than their allowances can buy additional allowances through an established market from others who intend to emit less than their allocated allowances. The cap is reduced incrementally over the years, thus incentivizing the reduction of the regulated emission through investment in better or alternative technology. The developing GHG cap-and-trade programs also often contain offset provisions allowing emitters to purchase credits by helping to finance projects that reduce GHG emissions not regulated by the scheme, such as reforestation, that can then be used to offset their GHG emissions in lieu of using allowances.

There are only a few cap-and-trade programs currently in operation. They include the EU-ETS and the U.S. Acid Rain Program. The EU-ETS is the first, and largest, scheme to regulate GHGs. But, as discussed in more detail below, it has encountered problems in calculating and distributing allowances, and monitoring and reporting emissions accurately to stabilize market prices. The Acid Rain Program regulates sulfur dioxide (SO₂), a pollutant that contributes to acid rain. Although this program avoided many of the problems faced by the EU-ETS due to its design differences and its smaller

reach, it encountered resistance from industry concerning allowance determinations.

B. Whom to Regulate and How Much to Regulate?

Policymakers, whether they use a traditional approach to regulating GHGs or enact a cap-and-trade program, will need to determine who will be subject to the regulation. It is simply not feasible (nor advisable) to regulate all emitters of GHGs since the simple act of breathing emits CO₂. Thus, a cap-and-trade program is likely to focus on only certain emitters of GHGs.

Large GHG sources in the United States can be grouped into six sectors: (1) electricity; (2) industrial; (3) commercial; (4) residential; (5) transportation; and (6) agriculture.¹⁴ Which of these sectors to include in a cap-and-trade program remains an open question. For example, the RGGI only focuses on power plants in the electricity sector. In contrast, the WCI, as currently contemplated, will apply to many more sectors, including electricity, industrial, commercial, residential, and transportation.¹⁵

Economic concerns could have an impact on which industries to regulate. The recent financial crisis and onset of a global recession have resulted in several European countries rethinking EU climate change regulation because of the extra cost such regulations could have on business in a downturn economy. For example, the British do not want aviation included in emission trading schemes, the Germans want a way out for heavy industry; and Poland wants to keep coal as a viable energy option.¹⁶

Moreover, there are inherent problems in balancing fairness against the administrative difficulties of regulating certain industries. For example, a decision to exclude the transportation sector, because it is difficult to monitor emissions from millions of vehicles, could be viewed as unfair since the transportation sector is the second largest source of GHG emissions.¹⁷

13. STAFF OF HOUSE COMM. ON ENERGY & COMMERCE, 110TH CONG., CLIMATE CHANGE LEGISLATION DESIGN WHITE PAPER 1 (Comm. Print 2008), available at http://energycommerce.house.gov/images/stories/Documents/PDF/selected_legislation/Climate%20Change%20White%20Paper-Cost%20Containment.052708.pdf.

14. ANPR, *supra* note 8, at 44402. There are also “changes in carbon stocks that result in emissions and sinks associated with land-use and land-use change activities.” *Id.*

15. WCI REPORTING COMM., W. CLIMATE INITIATIVE, BACKGROUND DOCUMENT AND PROGRESS REPORT FOR ESSENTIAL REQUIREMENTS OF MANDATORY REPORTING FOR THE WESTERN CLIMATE INITIATIVE: THIRD DRAFT 4 (2009), <http://www.westernclimateinitiative.org/ewebeditpro/items/O104F20790.doc> (last visited Mar. 24, 2009). Even under a more traditional regulatory framework, such as regulating GHGs under the CAA, the question of who to regulate comes into play. See generally ANPR, *supra* note 8.

16. Keith Johnson, Changed Climate: Meltdown Has Europe Backpedaling on Climate Caps, <http://blogs.wsj.com/environmentalcapital/2008/10/13/changed-climate-meltdown-has-europe-backpedaling-on-climate-caps/> (Oct. 13, 2008, 14:05 EST).

17. To avoid the administrative problems, proposals have sought to shift the point of regulation upstream, for example to oil refineries. While the refineries themselves are not responsible for the emissions in the transportation sector, their regulatory costs could be passed on to the end-users (who are responsible) in the form of fuel price increases. Whether or not the passed-along costs are sufficient market indicators to affect consumption patterns is disputed. See, e.g., U.S. EPA, EPA ANALYSIS OF THE CLIMATE STEWARDSHIP AND INNOVATION ACT OF 2007 (2007), <http://www.epa.gov/climatechange/downloads/s280fullbrief.pdf> (last visited Mar. 24, 2009). “The price signal provided by [an upstream cap-and-trade program] does not overcome the market barriers in the transportation sector that prevent larger reductions in GHG emissions.” *Id.* at 3.

There is also the issue of how much to regulate. Within each sector, there are individual users that emit a negligible percentage of the sector's emissions. Therefore, it may be reasonable to cover only those facilities that are large enough to have a tangible effect on GHG reduction. For instance, the RGGI covers fossil fuel-fired electric power plants that are 25 megawatts (MW) or greater in size (approximately 225 facilities regionwide).¹⁸ Under the WCI, covered entities and facilities are those with annual emissions equal to or greater than 25,000 metric tons of CO₂ equivalents (CO₂e).¹⁹ But a decision to regulate only very large facilities or upstream entities could be challenged as arbitrary and capricious.

C. What to Regulate?

After figuring out how to regulate, whom to regulate, and how much to regulate, policymakers must determine what emissions to regulate. Does one regulate all six main GHGs, i.e., CO₂, methane, nitrous oxide (NO_x), hydrofluorocarbons (HFCs), perfluorocarbons, and sulfur hexafluoride, or just some of them? Of these, CO₂ accounts for the bulk of GHG concentration in the atmosphere and has increased exponentially since the Industrial Revolution. Other GHGs, however, particularly fluorinated gases, have a higher per-molecule capacity than CO₂ to trap and retain heat.²⁰

Determining which GHGs to regulate involves political and administrative considerations. For example, regulating certain GHGs can be politically sensitive, especially where the public does not associate an industry with producing GHGs. Take agricultural and husbandry activities, for example. Most people do not associate GHGs with the food they eat. Yet, agriculture and husbandry activities are responsible for the bulk of anthropogenic methane and NO_x emitted. Because of this, regulating these industries, which could lead to increased costs for food products, could spur public outcry. In contrast, regulating CO₂ from refineries or power generators may be seen as less politically sensitive given that the public associates these industries more closely with GHGs and they are already highly regulated.

There are also administrative constraints in regulating some GHGs because of the difficulties in monitoring and reporting emissions from certain sources. Emissions that are easily monitored using attached sensors that submit data electronically (for example, CO₂ emissions from power plants) are perfect candidates for a cap-and-trade program. Other types of emissions that are more diffuse in nature, such as methane emissions from cows, create significant monitoring and reporting challenges, making inclusion of that gas difficult or impractical. But the exclusion of a particular gas, especially if it is emitted in significant quantities, can lead to challenges to the program by those who emit gases that come within the program.

18. Regional Greenhouse Gas Initiative, Executive Summary, http://www.rggi.org/docs/RGGI_Executive_Summary.pdf (last visited Mar. 24, 2009).

19. WCI REPORTING COMM., *supra* note 15, at 5.

20. U.S. EPA, INVENTORY OF U.S. GREENHOUSE GAS EMISSIONS AND SINKS: 1990–2007, at ES-9 to ES-11 (Public Review Draft, 2009), available at <http://www.epa.gov/climatechange/emissions/downloads09/07ES.pdf>.

II. Proposed and Developing GHG Cap-and-Trade Programs in the United States

The potential for passage of cap-and-trade legislation at the federal level has increasingly gathered more momentum over the last year. During the 110th congressional term, 10 bills regulating GHGs were submitted for consideration.²¹ Now as president, Obama has called for creating a cap-and-trade program under his fiscal 2010 budget blueprint.²² As members of the U.S. Senate and presidential candidates last year, both President Obama and Sen. John McCain (R-Ariz.) each released additional proposals for GHG cap-and-trade systems. Additionally, a discussion draft, entitled “The American Clean Energy and Security Act of 2009,” which, among other measures, included a cap-and-trade program, was released by the House Committee on Energy and Commerce on March 31, 2009.²³

The first subsection below compares and contrasts the three most prominent federal proposals for a cap-and-trade program: (1) the leading Senate bill from the 110th Congress, the Boxer-Lieberman-Warner Climate Security Act of 2008 (the Boxer-Lieberman-Warner Bill),²⁴ which was narrowly defeated last year by falling 12 votes short of the 60 votes needed to continue debate, i.e., invoke cloture, followed by a vote on the bill itself;²⁵ (2) the House Discussion Draft; and (3) President Obama's cap-and-trade proposal. Many viewed the Boxer-Lieberman-Warner Bill as a test model for legislation to be introduced during the current congressional term and the close vote as a sign of cap-and-trade legislation's chances for success under the new Obama Administration.²⁶ The president's call for a cap-and-trade program under his budget proposal for fiscal year 2010 and the follow-up House Discussion Draft would appear to confirm the likelihood that some form of a federal cap-and-trade program will eventually be successful in the near future. In fact, despite the onset of a deep economic recession, the president and Congress have not been dissuaded from pushing forward with passage of a cap-and-trade program at the federal level.²⁷ Although the Senate has declined

21. H.R. 6316, 110th Cong. (2008); H.R. 4226, 110th Cong. (2007); S. 2191, 110th Cong. (2007); S. 1766, 110th Cong. (2007); H.R. 1590, 110th Cong. (2007); S. 485, 110th Cong. (2007); H.R. 620, 110th Cong. (2007); S. 317, 110th Cong. (2007); S. 309, 110th Cong. (2007); S. 280, 110th Cong. (2007).

22. Erin Marie Daly, *Obama's Budget Predicts \$645B From Carbon Caps*, LAW360, Feb. 26, 2009, <http://www.law360.com/articles/88982>.

23. See H.R. ___, 111th Cong. (2009) (Discussion Draft, submitted by Rep. Henry Waxman (D-Cal.) and Rep. Edward Markey (D-Mass.) on Mar. 31, 2009) [hereinafter Discussion Draft], http://energycommerce.house.gov/images/stories/Documents/PDF/selected_legislation/clim08_001_xml.pdf (last visited Mar. 25, 2009).

24. S. 3036, 110th Cong. (2008) (substitute amendment to America's Climate Security Act of 2007, S. 2191, 110th Cong. (2007), submitted by Senator Boxer on May 20, 2008).

25. Senator Boxer has indicated that she is working on a new climate change bill to be offered by the end of 2009. Azadeh Ensha, *Barbara Boxer Promises Cap-and-Trade Bill*, N.Y. TIMES, Feb. 3, 2009 <http://greeninc.blogs.nytimes.com/2009/02/03/barbara-boxer-promises-cap-and-trade-system/>.

26. See Kate Sheppard, *An Inhospitable Climate*, <http://gristmill.grist.org/story/2008/6/6/6159/54712> (June 6, 2008, 06:51 EST) (“[Senator Boxer] said today's vote—and the support from both presidential candidates—is a positive development, and creates a ‘road map’ for next year.”).

27. Interestingly, the once politically dead alternative of a carbon tax has gained new life in Congress as a result of the economic crisis. Rep. John Larson (D-Conn.),

to fast-track a cap-and-trade program under the pending budget resolution via budget reconciliation rules,²⁸ the chairmen of both the Senate Budget and Environment and Public Works committees have publicly committed to ensuring that a cap-and-trade provision is included in the budget resolution, and Chairman Barbara Boxer (D-Cal.) will soon begin writing a cap-and-trade bill for passage in the Senate this year.²⁹

While debate at the federal level continues, three regional cap-and-trade programs (RGGI, WCI, and MGGRA) are already underway, and California has passed legislation that requires California to reduce its GHG emissions to 1990 levels by 2020. Accordingly, the second subsection below compares and contrasts the approaches taken by the state and regional programs to the pending federal approaches.

Emerging schemes at the federal, regional, and state level will pose a wide range of new legal challenges. After we have discussed the contours of design differences among these emerging systems, we will examine the problems and litigation associated with established systems, such as the EU-ETS and Acid Rain Program. The challenges these programs have faced help to anticipate the likely challenges to arise under new federal, regional, and state cap-and-trade programs.

A. Federal Cap-and-Trade Proposals

There are several key issues that any new federal cap-and-trade program will have to address. Key design differences include: (1) what industries to regulate; (2) how to allocate and price allowances; (3) the extent to which entities can offset emissions by purchasing credits; and (4) how ambitious the timetable should be for meeting GHG reduction goals. We discuss each of these issues below by comparing and contrasting the way they are treated under the Boxer-Lieberman-Warner Bill, the House Discussion Draft, and President Obama's proposal.

I. Industries Covered

First, any federal proposal will have to address which industries should be subject to the cap. As originally proposed, the Lieberman-Warner Climate Security Bill would have regulated GHGs under a cap-and-trade program from all power

plants and industrial facilities, as well as manufacturers and importers of fossil fuels and chemicals with emissions that exceed 10,000 metric tons of CO₂e³⁰ annually.³¹ The Senate Environmental and Public Works committee made key design changes to the original bill before reporting it to the Senate, including expanding the definition of covered facilities to include coal-burning plants, natural gas processing plants and importers, producers and importers of petroleum- or coal-based fuel, facilities that produce or import (for sale) more than 10,000 CO₂e of GHG, and facilities that emit more than 10,000 CO₂e of HFCs as a byproduct.³² The emissions of covered facilities would have been monitored at the upstream level, except for coal where the point of control would have been a facility consuming more than 5,000 metric tons of coal in a calendar year. The justification for this distinction was that coal is often burned in large quantities by a small number of facilities, e.g., power plants, so that downstream regulation would be necessary to effectively reduce emissions.³³

The House Discussion Draft released in March covers similar sources: power plants, fuel producers and importers; fluorinated gas producers and importers; geological sequestration sites; industrial stationary sources; industrial fossil fuel-fired combustion devices; and natural gas local distribution companies.³⁴ The threshold for entities covered by the cap (25,000 metric tons of CO₂e annually), however, is much higher than last year's Boxer-Lieberman-Warner Bill. This means that fewer entities would be covered under the cap.

Although many of the details of President Obama's proposal were not specified, it is likely that his plan supports coverage of sources similar to those in the Boxer-Lieberman-Warner Bill and House Discussion Draft, which are aimed at economywide emissions by large facilities of all six GHGs.

2. Allowance Allocation Mechanism

Next, a federal proposal must determine how to distribute allowances, whether freely or by auction or a combination of both. The president's proposal, which takes the strictest approach of the three, would require that 100% of the allowances be auctioned from the very beginning of the program, which is predicted to generate revenues as much as \$645.7

who is Chairman of the House Democratic Caucus and a member of the Ways and Means Committee, has revived this idea as a solution to global warming and introduced a bill in March. John Broder, *House Bill for a Carbon Tax to Cut Emissions Faces a Steep Climb*, N.Y. TIMES, Mar. 6, 2009, available at <http://www.nytimes.com/2009/03/07/us/politics/07carbon.html>. The bill is revenue neutral, imposing a per-unit carbon tax with almost all of the revenues returned to taxpayers through reduced payroll taxes. Rep. Larson argues that Americans today are more fearful of market-based mechanisms than direct taxes due to the implosion of the financial markets. See Geof Koss, Congress Now, Larson Sees Financial Mess Providing Opening for Carbon Tax (Dec. 9, 2008), <http://congressnow.gallerywatch.com/ArticleDetail.aspx?articleID=7531>.

28. Walter Alarcon, *Dems Help Ban Reconciliation Vote on Climate Change*, (Apr. 1, 2008), <http://thehill.com/leading-the-news/dems-help-ban-reconciliation-vote-on-climate-change-2009-04-01.html>. Under such rules, legislation is limited to 20 instead of 30 hours of debate, amendments are limited, only a simple majority is required for passage, and filibustering is prohibited. This would remove a significant barrier to passage since past bills, such as the Lieberman-Warner Bill, failed to garner the 60 votes needed to avoid a filibuster.

29. Jay Hefflin, *Congress Now, Democrats Could Use Budget Reconciliation to Pass Cap and Trade Plan* (Feb. 26, 2009), <http://congressnow.gallerywatch.com/ArticleDetail.aspx?articleID=8449>.

30. The bill used the Intergovernmental Panel on Climate Change's (IPCC) concept of the Global Warming Potential (GWP) equivalency unit. The GWP compares each GHG's capacity to trap heat in the atmosphere to a baseline gas (CO₂) to establish an equivalency unit for monitoring and regulatory purposes. U.S. EPA, *supra* note 20, at ES-3. Examples of GWP for GHGs include: CO₂ = 1, CH₄ = 21, HFC-23 = 11,700. *Id.*

31. See S. 2191, 110th Cong. §4(7) (2007) (defining covered facilities).

32. The committee distinguished HFCs from all other GHGs, calling the latter "Group I" GHGs and the former "Group II" GHGs. The committee added a new section to separately address Group II GHGs. That section established a completely separate HFC initial cap at 300 metric tons of CO₂e allowances. The rationale for this distinction was that HFCs (chemicals used in refrigerators and air conditioners) are 14,800 times more potent than CO₂ so their costs in the trading system could not be so prohibitively high that it would force companies to close their HFC facilities. See Office of Sen. Joe Lieberman, *Frequently Asked Questions on Global Climate Change*, at 11, <http://lieberman.senate.gov/documents/lwcsafaq.pdf> (last visited Mar. 25, 2009).

33. *Id.* at 9.

34. Discussion Draft, *supra* note 23, §713 & §722 (defining "covered entity" and compliance obligations).

billion by 2019.³⁵ The Administration would like the program to start in 2012 and predicts that \$78.7 billion would initially be generated.³⁶ A portion of the revenues generated from the auction totaling \$150 billion would be used to support the development of clean energy over 10 years. The rest would be used to reduce personal income taxes and assist communities and businesses heavily impacted by the transition to cleaner technologies.³⁷

The original version of the Boxer-Lieberman-Warner Bill (known as the Lieberman-Warner Bill) at first distributed emission allowances freely and reserved only a small percentage for auction purposes, the proceeds of which would have been used to fund various clean technology and transition assistance funds. As originally proposed, it freely allocated 20% of the Emission Allowance Account to the power sector and 20% to the industrial sector.³⁸ Only 18% was reserved for auctioning.³⁹ As reported out of committee, the bill was altered to increase the percentage of auctioned allowances to encourage investment in cleaner technologies by raising the cost to emit GHGs: 26.5% of the allowances would be auctioned starting in 2012 (including 5% at an early auction to be held shortly after enactment), jumping to 69.5% by 2031.⁴⁰

In light of the contentiousness of having companies pay for allowances in the midst of an economic recession, the House Discussion Draft as initially released does not address the issue. Instead, Chairman Henry Waxman (D-Cal.) plans to discuss the issue among the committee before setting forth a specific proposal.⁴¹ Although the discussion draft contemplates that a portion will be freely allocated and a portion will be auctioned off, the percentages of each are to be supplied later. How the auction proceeds are to be spent is also left to be determined sometime in the future. Along the same concerns, President Obama has recently acknowledged that 100% auctioning may not be politically viable, at least at the start of the program.⁴² One member of the Energy and Commerce Committee has proposed setting aside approximately 15% as

free allowances to industries most susceptible to international competition, such as steel, glass, and paper.⁴³

3. Pricing and Offsets

Another significant issue is whether to employ mechanisms that curb compliance costs to minimize adverse effects on the U.S. economy and businesses. Relevant questions include the extent to which a federal proposal should control allowance prices and permit emitters to offset their emissions by purchasing credits (rather than reducing their own emissions or purchase additional allowances). The original Lieberman-Warner Bill allowed facilities to meet 30% of their annual allowance submission requirement by purchasing offsetting credits.⁴⁴ Fifteen percent of the offset had to come from domestically generated offset allowances⁴⁵ and required EPA to promulgate regulations within 18 months of the bill's passage, specifying eligible projects.⁴⁶ The remaining 15% could be obtained from an approved foreign GHG emissions trading market.⁴⁷ In an effort to secure the 60 votes needed to overcome a filibuster, Senator Boxer, Sen. John Warner (R-Va.), and Sen. Joe Lieberman (Ind-Conn.) introduced a substitute amendment to S. 2191 to make the legislation more politically palatable. Among other changes, the substitute amendment, i.e., the Boxer-Lieberman-Warner Bill, S. 3036, significantly revised offsets. The revised bill set an aggregate limit on the total number of offsets allowed in the market, rather than for each entity. Entities could, under this version of the bill, use as many offsets for compliance as they desire, but there would be a limit on how many offsets would be available for purchase from each of three general categories: domestic; international; and forest.⁴⁸

The substitute amendment also established a cost-containment auction (CCA) separate from regular auctions as an "emergency off-ramp" to help moderate allowance prices and contain compliance costs by releasing additional allowances into the market if the costs of allowances rise above a certain price range. Each year from 2012 to 2027, there would be a pool of allowances (pulled from future allocations in 2030 through 2050) available for sale at a set price.⁴⁹

35. *Id.*

36. *Id.*

37. Stephen Power, *Carbon Trading to Raise Consumer Energy Prices*, WALL ST. J., Feb. 27, 2009, at A8, available at <http://online.wsj.com/article/SB123566843777484625.html>.

38. S. 2191, 110th Cong., §3901 (2007).

39. *Id.* §§3101, 3201. The bill also allocated 10% of the account to regulated retail electricity providers to sell on the market, the proceeds of which were to be used to mitigate economic impacts on, and promote energy efficiency among, low- and middle-income energy consumers. *Id.* §3501. Additionally, it allocated 5% of the account for use in reducing GHG emissions and increasing GHG sequestration from the agriculture and forestry sectors and 5% to covered facilities that have taken early action (since 1994) to reduce GHG emissions (for example, participation in EPA or DOE voluntary programs). *Id.* §§3301, 3701. The remaining allowances were to be allocated to states, tribal communities, a carbon sequestration account, and for international forestry projects.

40. See Pew Center on Global Climate Change, Summary: Lieberman-Warner Climate Security Act—S.2191, <http://www.pewclimate.org/docUploads/Pew-S2191-Summary-12-05-2007.pdf> (last visited Mar. 25, 2009).

41. U.S. House of Representatives, Discussion Draft Summary, The American Clean Energy and Security Act of 2009, at 1 [hereinafter Discussion Draft Summary], http://energycommerce.house.gov/Press_111/20090331/acesa_summary.pdf.

42. Ian Talley, *White House Flexibility Signaled on Climate Bill*, WALL ST. J. Apr. 8, 2009, available at <http://online.wsj.com/article/SB123922598643102605.html>.

43. Lisa Lerer, *Emissions Bill Fuels Fight in Congress*, POLITICO, Apr. 7, 2009, available at <http://www.politico.com/news/stories/0409/20959.html>.

44. S. 2191 §1202.

45. *Id.* §2402(a).

46. *Id.* §2402(b). The legislation mandated that eligible projects had to demonstrate "real, verifiable, additional, and permanent and enforceable" reduction in GHGs or increases in sequestration. *Id.* §2402(b)(1).

47. *Id.* §2501. EPA would certify foreign ETS that can be used under this section. The foreign ETS must have absolute caps and be of comparable stringency to the US ETS. *Id.* §2502.

48. For domestic offset allowances, up to 15% could be distributed of the total quantity of emissions allowances established for each year. For international offset allowances, 5% of emissions allowances of each year could be distributed, e.g., Clean Development Mechanism projects under the Kyoto Protocol. For forest offset allowances, 10% could be distributed. Forest allowances are generated from reductions in deforestation and degradation. If there were not enough domestic offsets available to satisfy the 15% cap, then entities could make up the difference with international and forest offsets.

49. The total size of the pool was to be 6 billion allowances, only a fraction of which would be available in any given year. Allowances from this pool that were sold through the auction would have to be made up in the 2030 to 2050 period. The price set for these allowances would be between \$22 and \$30 in 2012, with the

The House Discussion Draft provides similar mechanisms to contain compliance costs. Emitters would have access to a “strategic reserve” of allowances if allowance prices reach a certain level.⁵⁰ The reserve would contain 2.5 billion allowances, created through taking a small percentage from the base allocation pool. These reserve allowances would be auctioned quarterly at minimum prices, which, beginning in 2015, would be twice the average allowance price over the last three years. Reserve purchases are capped at 10% of covered entities’ compliance obligation. In addition, covered entities could purchase eligible domestic and international offset credits, but must submit 1.25 offset credits for every emission allowance offset. The percentage of entities’ allowances that could be satisfied with offsets in any year is limited by a set formula and would increase over time (30% in 2012 increasing to 65% in 2050). Offsets would be ineligible if used for compliance under a state or regional program.

President Obama has not made clear whether he supports or will support the use of offsets or allowance price controls. His budget, however, does assume a starting price of \$20 per ton for carbon emissions, an amount that his Administration says is conservative and would likely rise.⁵¹ Additionally, lawmakers from coal-dependent and heavy manufacturing states are expected to demand more of the revenues generated by the program, since they will be more heavily hit by the program’s costs.⁵²

The Government Accountability Office (GAO) has expressed concerns over fraud involved in offset projects. Thus, the GAO recommends establishing clear rules on the types of projects that qualify and developing a registry for tracking the creation and ownership of offsets to ensure that emissions are actually reduced. It is likely that if Congress and the Administration allow the use of offsets, they will follow the GAO’s recommendations.⁵³

4. Time Frame and GHG Goals

Lastly, these three proposals present differing timetables and GHG reduction goals. The Lieberman-Warner Bill would have capped, in decreasing amounts, the number of annual allowances from 2012-2050.⁵⁴ The committee altered the amount of allowances for covered sources of GHGs (except HFCs, which had a separate cap)⁵⁵ to approximately 4% below 2005 levels in 2012 (resulting in a net increase of approximately 575 million allowances from the original bill). Emissions would then decrease to 19% below 2005 levels by 2020 and by 71% by 2050. The United Nations Framework Convention on Climate Change (UNFCCC), the main international forum on

climate change, advised that industrialized nations need to reduce emissions to 8% of 1990 levels by 2050 in order to effectively curb GHG emissions. EPA estimated that the bill would only reduce emissions to 25% of 1990 levels.

As for the House Discussion Draft, the caps are similar, but would be slightly more stringent in the later periods, requiring emissions to reach 3% below 2005 levels by 2012, 20% by 2020, 42% by 2030, and 83% by 2050. These targets, however, also fall short of the UNFCCC’s recommendation. As with the Lieberman-Warner Bill, HFCs would be covered under a separate cap by amending Title VI of the CAA with 100% of allowances auctioned by 2019.

President Obama’s proposed cap-and-trade program is slightly less ambitious in the initial stages, requiring a reduction of carbon emissions to 14% below 2005 levels by 2020, but maintains the same 83% below 2005 levels by 2050.⁵⁶ Unlike the targets set during his presidential campaign, however, these targets do not follow the UNFCCC’s recommendation.

B. Regional and State Programs

In addition to the debate at the federal level on a GHG cap-and-trade program, there are several regional initiatives under way and California has mandated, through the passage of AB 32, the reduction of GHGs to 1990 levels by 2020. Their design features could help inform policymaking at the federal level. They also create the potential for future litigation, such as challenges based on preemption by a federal scheme, challenges to the rulemaking process, objections to administrative determinations, and enforcement actions, which are discussed later in this Article.

I. The Northeast RGGI

RGGI is the first mandatory, market-based CO₂ emissions reduction program in the United States. It is the least ambitious of the regional programs: RGGI only seeks to reduce emissions of one GHG—CO₂—by one source—power plants.⁵⁷ The emission reduction goals of RGGI are to hold regional emissions steady at the current level of 188 million tons of CO₂ per year over the period 2009-2014, then achieve reductions of 2.5% per year over the period 2015-2018.⁵⁸ Allowances may be banked for future use.⁵⁹

RGGI’s 10 participants are Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont. The District of Columbia, Pennsylvania, the eastern Canadian provinces, and New Brunswick have indicated that they may join the initiative at a later date.

The cap-and-trade program will be implemented using state regulations that establish 10 individual CO₂ Budget

exact price to be set by the president. The price of the allowance would rise by 5% over inflation each year thereafter.

50. Discussion Draft Summary, *supra* note 41, at 3.

51. Daly, *supra* note 22.

52. Power, *supra* note 37.

53. Annemargaret Connolly & Matthew D. Morton, *Obama Victory Paves Way for Federal Climate Law*, LAW360, Nov. 5, 2008, <http://environmental.law360.com/articles/75723>.

54. S. 2191, 110th Cong. §1201(d) (2007).

55. HFCs were to be cut more rapidly, declining from 2012 levels by at least 15% in 2020, 45% in 2030, and 70% by 2040.

56. Daly, *supra* note 22.

57. Regional Greenhouse Gas Initiative, About RGGI, <http://www.rggi.org/about> (last visited Mar. 25, 2009).

58. Regional Greenhouse Gas Initiative, *supra* note 18.

59. Dustin Till & Claire Jahns, *Cap and Trade: Nation’s First Carbon Auction Underway*, MARTEN L. GROUP ENVTL. NEWS, Aug. 15, 2008, <http://www.martenlaw.com/news/?20080815-first-carbon-auction>.

Trading Programs, based on a RGGI Model Rule, that are linked through CO₂ allowance reciprocity. The 10 states will auction 100% of available allowances, rather than allocate a portion of them free of charge.⁶⁰

The first “pre-compliance” auction was held on September 25, 2008. Six of the 10 participating states auctioned a total of 12.5 million allowances, i.e., 12.5 million tons, of CO₂ in 1,000-ton lots.⁶¹ Regulated entities from all 10 states as well as nonregulated investors, such as emissions brokers and traders, were allowed to bid in the September auction.⁶² Potomac Economics, which was retained to serve as the market monitor for RGGI, stated that the auction was “robust with 59 separate entities submitting bids to purchase more than four times the available supply of allowances in the auction.”⁶³ The second auction was held on December 17, 2008. Potomac Economics reported that 69 separate entities participated from all 10 states and purchased 3.5 times the available supply, most of which were bought by compliance entities.⁶⁴ The auction raised \$106.5 million in revenues to be used by the states to invest in energy efficiency and renewable energy technologies.⁶⁵ The third auction, held on March 18, 2009, was also successful, raising a total of \$117 million in revenues.⁶⁶ It was the first auction since the start of the first compliance period, which began on January 1, 2009. Fifty entities submitted bids to purchase 2.5 times the available supply of vintage 2009 allowances. A parallel auction was also held for a small percentage of allowances for the second compliance period (starting in 2012) to test the viability of a future market. Twenty entities submitted bids to purchase 2.3 times the available supply. Compliance entities purchased 78% of the allowances in the vintage 2009 auction and 93% in the vintage 2012 auction. The fourth and fifth auctions are scheduled for June 17, 2009, and September 9, 2009, respectively.⁶⁷

2.WCI

A separate regional cap-and-trade program is being developed in the West, known as the WCI. WCI members include seven states (Arizona, California, Montana, New Mexico, Oregon, Utah, and Washington) and four Canadian provinces (British Columbia, Manitoba, Ontario, and Quebec).⁶⁸ While WCI participants are closely following RGGI’s initial operational experiences and auction results, their cap-and-trade program, as currently envisioned, is much more expansive.

WCI’s goal is to reduce GHG emissions by 15% below 2005 levels across the region by 2020 and would regulate nearly 80% of GHG emissions in participating states and provinces, covering over 73% of the Canadian economy and almost 20% of the U.S. economy.⁶⁹ WCI’s program is scheduled to begin January 1, 2012, and is to operate in three-year compliance cycles.

The emissions threshold for inclusion in the cap-and-trade program is 25,000 metric tons of CO₂e on an annual basis. The current design of WCI will cover “[c]ombustion and non-combustion emissions from electrical generation, large industrial and commercial facilities, and oil and gas production and gas processing,” in the first compliance period.⁷⁰ Combustion emissions from residential, smaller commercial and industrial, and transportation fuels are included in the second compliance period to begin in 2015. The GHGs to be covered are CO₂, methane, NO_x, HFCs, perfluorocarbons, and sulfur hexafluoride.

The point of regulation varies by source category. Many sources, including electrical generation within WCI Partner jurisdictions and most industrial source categories are regulated at the facility level. Imported electricity is regulated at the first entity that receives and delivers it for consumption within a WCI Partner jurisdiction. Fuel combustion emissions from residential sources, from commercial and industrial sources with emissions below the reporting threshold, i.e., 10,000 metric tons of CO₂e,⁷¹ and from transportation sources are regulated upstream of the point of combustion, where the fuel enters commerce, generally at the distributor level.

WCI Partners will develop a design for the regional auction process by the end of 2009 and each Partner state will deter-

60. *Id.*

61. *Id.* See Regional Greenhouse Gas Initiative, Auction Results, <http://rggi.org/co2-auctions/results> (last visited Apr. 10, 2009). This figure represents only a fraction of the 2009 emission allowances allocated for electric power producers in Connecticut, Maine, Maryland, Massachusetts, Rhode Island and Vermont, with the auction of the remaining allowances to take place in a series of quarterly auctions in the future. Till & Jahns, *supra* note 59. The auction of allowances from Delaware, New Hampshire, New Jersey, and New York are to take place at the subsequent auctions, after those states complete necessary state-level rule-makings. *Id.* All 10 states’ rules are now effective since January 1, 2009.

62. Till & Jahns, *supra* note 59.

63. Potomac Economics Memorandum, *supra* note 3.

64. Memorandum from David Patton and Pallas Lee VanSchaick of Potomac Economics to RGGI, Inc. and RGGI Participating States (Dec. 18, 2008) [hereinafter Potomac Economics Memorandum II], http://www.rrgi.org/docs/Auction%202%20Post_Auction_Report_Market%20Monitor_b.pdf.

65. Press Release, Regional Greenhouse Gas Initiative, Post-Settlement Auction Report Shows Robust Market for RGGI Carbon Dioxide Emissions Allowances (Jan. 6, 2009), <http://rggi.org/docs/Auction%202%20Post%20Settlement%20Auction%20Report.pdf>.

66. Memorandum from David Patton and Pallas Lee VanSchaick of Potomac Economics to RGGI, Inc. and RGGI Participating States (March 20, 2009) [hereinafter Potomac Economics Memorandum III], <http://rggi.org/docs/Auction%203%20News%20Release%20MM%20Report.pdf>.

67. See Regional Greenhouse Gas Initiative, Upcoming Auctions, <http://www.rrgi.org/co2-auctions/upcoming> (last visited Apr. 10, 2009).

68. Other U.S. and Mexican states and Canadian provinces have joined as observers. Observer states from the U.S. include Alaska, Colorado, Idaho, Kansas, Nevada, and Wyoming. The Canadian province of Saskatchewan and Mexican states of Baja California, Chihuahua, Coahuila, Nuevo Leon, Sonora, and Tamaulipas are also observers. See Western Climate Initiative, WCI Observers, http://www.westernclimateinitiative.org/View_all_Observers.cfm (last visited Mar. 25, 2009).

69. Steven Jones, *It’s Getting Hot in Here—Western Climate Initiative Updates Scoping, Reporting Rules*, MARTEN L. GROUP ENVTL. NEWS, July 30, 2008, <http://www.martenlaw.com/news/?20080730-wci-rules-updated>.

70. WCI REPORTING COMM, *supra* note 15, at 4.

71. *Id.* at 6. The reporting threshold, i.e., 10,000 metric tons of CO₂e, is much lower than the cap-and-trade threshold, i.e., 25,000 metric tons of CO₂e, for the program to ensure accurate data for those excluded from the cap, to track whether the cap-and-trade threshold is set at the appropriate level, to monitor potential leakage to facilities below the cap-and-trade threshold, and to be consistent with the level being considered for potential federal legislation in the United States. *Id.*

mine how to allocate its apportioned allowances.⁷² A percentage of each Partner's allowance budget will be dedicated to the development of energy efficiency and cleaner technologies. WCI participants will have to auction at least 10% of their allowances in the first compliance period, with a minimum increase to 25% by 2020.

Under the current design, regulated entities will have three basic compliance options: (1) reduce emissions; (2) purchase allowances from other approved trading systems; or (3) purchase offsets. WCI Partners will limit their offsets and foreign allowance purchases to no more than 49% of the total required emission reductions from 2012-2020. Each WCI Partner has discretion to set a lower limit.

With the current recession, however, there has been increasing concern by stakeholders that WCI could prolong the economic downturn and weaken power grids. According to a report issued by the Western Business Roundtable, WCI may disadvantage the West because it would discourage investment in reliable, low-carbon technologies, such as natural gas, nuclear, and hydropower in that region while encouraging the rapid and large deployment of highly variable power sources, such as solar and wind, which may increase the occurrence of power outages.⁷³ Coupled with the strong prospect of federal legislation, this has prompted some states, like Washington, to scale back on their commitment to participating in WCI.⁷⁴

3. MGGRA

The latest regional scheme being developed is the MGGRA. Six states (Illinois, Iowa, Kansas, Michigan, Minnesota, and Wisconsin⁷⁵) and the Canadian province of Manitoba have agreed to develop a multisector cap-and-trade system, to establish GHG emission reduction targets and time frames, and to join the voluntary Climate Registry for tracking GHG emissions.⁷⁶

The participants convened an Advisory Group of various stakeholders in early 2008. The group released an updated version of its preliminary recommendations in December 2008, which will be finalized in March or April 2009.⁷⁷ In the draft, the Advisory Group requests a modeling analysis of a target that reduces GHG emissions by 15, 20, and 25% below 2005

levels by 2020. The Advisory Group recommends a target of 60 to 80% below 2005 levels by 2050. The group further advises that the program should cover all six GHGs and the following sectors: electricity generation and imports; industrial combustion sources; industrial process sources (if credible measurement and monitoring protocols can be developed beforehand); and fuels serving residential, commercial, and industrial buildings (during the second compliance period). Additionally, the group discusses the potential coverage of transportation fuels.

Like the WCI, the Advisory Group advises that the point of regulation for residential, commercial, and industrial fuel combustion facilities and transportation fuel combustion be covered at the upstream level, i.e., at the terminal rack, final blender, or distributor level. The point of regulation for electricity is the first deliverer and for industrial combustion and process emissions at the emissions' sources. Recommended thresholds will be established on a sector-by-sector basis with a target of including 85 to 95% of emissions in each sector.

With respect to auctioning, the Advisory Group leaves it up to the jurisdictions to decide whether to auction or freely distribute allowances. The group also endorses the use of offsets, but they must be real, additional, verifiable, permanent, and enforceable to ensure the integrity of the cap-and-trade program. The Advisory Group recommends that the offsets be limited. The specific limits will be determined after review of modeling results.

Accord participants anticipate developing a draft model rule in May to August 2009, that each state and province can adopt to implement the program. The participants must complete all accord commitments by mid-2010. The program is scheduled to begin on January 1, 2012, and is to operate in three-year compliance periods.

4. California AB 32: The Global Warming Solution Act of 2006

With the passage of AB 32, California became the first state to mandate reductions in GHG emissions. This legislation requires the state to reduce emissions from all six GHGs to 1990 levels by 2020—a reduction of about 30%.⁷⁸ In addition, Gov. Arnold Schwarzenegger (R-Cal.) issued an Executive Order in 2005 that called for the state to achieve an 80% reduction below 1990 levels by 2050.⁷⁹ The California Air

72. WESTERN CLIMATE INITIATIVE, DESIGN RECOMMENDATIONS FOR THE WCI REGIONAL CAP-AND-TRADE PROGRAM 8 (2008) [hereinafter WCI Design Recommendations], <http://www.westernclimateinitiative.org/ewebeditpro/items/O104F20432.PDF>.

73. Morgan Bettex, *Cap-and-Trade Plan Economically Flawed: Report*, LAW360, Feb. 18, 2009, <http://environmental.law360.com/articles/87877>.

74. Legislative versions of Washington's cap-and-trade bill to authorize the state's involvement in WCI have been altered significantly, with the Senate bill implementing only a voluntary emissions reduction program. The versions are still in the rules committees. Carbon Finance, "Washington State's WCI Participation in Question" (Mar. 6, 2009), <http://www.carbon-financeonline.com/index.cfm?section=americas&action=view&id=11899>.

75. Indiana, Ohio, Ontario, and South Dakota joined as observers. MIDWESTERN ENERGY SEC. & CLIMATE STEWARDSHIP SUMMIT, MIDWESTERN GREENHOUSE GAS REDUCTION ACCORD 4 (2007), available at http://www.midwesterngovernors.org/Publications/Greenhouse%20gas%20accord_Layout%201.pdf.

76. *Id.* at 3.

77. See MIDWESTERN GREENHOUSE GAS REDUCTION ACCORD: PRELIMINARY RECOMMENDATIONS OF THE ADVISORY GROUP (2008) [hereinafter MGGRA Recommendations], available at http://www.midwesternaccord.org/Meeting%20material%20pages/GHG-meeting-8/Accord_Draft_Recs_Dec08.pdf.

78. California Air Resources Board, Background, <http://www.arb.ca.gov/cc/cc.htm> (last visited Mar. 25, 2009). See CAL. HEALTH & SAFETY CODE §38550 (West 2009).

79. Following California's lead, another state governor issued an executive order and recently signed into law policies aimed at reducing GHG emissions. On June 25, 2008, Gov. Charlie Crist (R-Fla.) signed into law House Bill 7135, which includes the Florida Climate Protection Act authorizing the Florida Department of Environmental Protection (DEP) to develop an electric-utility GHG cap-and-trade program. The program, among other things, will develop a time line to reduce electric sector GHG emissions to 2000 levels by 2017, 1990 levels by 2025, and 80% below 1990 levels by 2005, in accordance with Governor Crist's Executive Order 07-127 from July 2007. Pew Center on Global Climate Change, Florida Utility-Sector Greenhouse Gas Cap-and-Trade Program, <http://www.pewclimate.org/node/6020> (last visited Mar 25, 2009). The DEP cannot adopt rules until after January 1, 2010, and must be approved by the legislature. The Governor's Action Team on Energy and Climate Change has

Resources Board (CARB) is the lead agency responsible for implementing AB 32 and is required to prepare a scoping plan to achieve AB 32's GHG reduction goals.

On December 11, 2008, CARB approved the Climate Change Proposed Scoping Plan (Scoping Plan),⁸⁰ which contains various GHG emissions reduction measures, including market mechanisms, regulations, voluntary measures, and fees,⁸¹ designed to meet AB 32's and the 2005 Executive Order's goals. One of the plan's measures is a proposed cap-and-trade program to begin in 2012 that is being developed to dovetail with WCI to create a regional market system. Although many of the program's details have yet to be developed (they are to be developed over the next two years), the current version will cover multiple sectors and 85% of California's GHG emissions. CARB proposes to cap electricity generators and large industrial facilities (emitting over 25,000 metric tons of CO₂e) starting in 2012.⁸² During the second compliance period, which is set to begin in 2015, the program will cap industrial fuel combustion facilities (emitting at or below 25,000 metric tons of CO₂e), all commercial and residential fuel combustion where the fuels enters into commerce, e.g., at the distributor, and transportation fuel combustion where the fuel enters into commerce, e.g., at the terminal rack, final blender, or distributor.⁸³

The Scoping Plan specifically provides that California's cap-and-trade program will be linked with other WCI Partner programs.⁸⁴ The design recommendations by WCI Partner jurisdictions released in September 2008, were developed in collaboration with California and are consistent with the Scoping Plan. California's allowance budget under WCI will be based on the levels of emissions needed to achieve the AB 32 target for 2020.⁸⁵

The Scoping Plan, however, still leaves some issues to be resolved during the rulemaking process, including the extent to which allowances should be auctioned. The California Energy Commission and Public Utilities Commission issued a joint opinion on October 16, 2008, regarding implementation of AB 32's requirements. It recommends that the auctioning

of allowances be phased in, starting with 20% of allowances in 2012 and reaching 100% in 2016.⁸⁶

Another issue still to be fully resolved is the extent to which offsets can be purchased by regulated entities as credits. The Scoping Plan limits offsets to no more than 49% of reductions.⁸⁷ Although no firm commitment has been made by CARB, it has also suggested that a 10% limit on offsets for an individual entity's compliance obligation may be appropriate.

III. Examples of Current Emissions Trading Schemes

In thinking about possible litigation stemming from emerging U.S. cap-and-trade programs, it is useful to examine existing cap-and-trade systems. Accordingly, in this section we examine the EU-ETS and U.S. Acid Rain Program and discuss some of the problems they have encountered. Although the design choices of each program affected the type and scope of challenges they faced, there are some problems that appear endemic to cap-and-trade systems more generally. For example, inherent problems include leakage concerns (businesses fleeing to nonregulated states or countries), competitive disadvantages placed on regulated entities in the marketplace, discrimination based on arbitrary decisionmaking by governments to choose winners and losers under the system, and the proper distribution of power among various regulatory authorities or levels of government.

A. EU-ETS

The EU-ETS is the largest cap-and-trade system ever implemented and the first to regulate a GHG. Currently, all 27 EU Member States and members of the European Free Trade Association (EFTA) participate in EU-ETS,⁸⁸ which regulates roughly one-half of Europe's total CO₂ emissions.

I. Overview

On May 31, 2002, the EU ratified the Kyoto Protocol, binding its Member States to reduce their aggregate GHG emissions for 2008-2012 by 8% from 1990 levels. To meet the targets in the least costly manner, the EU adopted a directive establishing a CO₂ emissions trading scheme,⁸⁹ in addition to other market-oriented mechanisms, such as the Clean

recommended that Florida seek observer status under RGGI and/or WCI and push for a national cap-and-trade program. Governor's Action Team on Energy and Climate Change, C&T Policy Draft: Action Team Notes, at B-5 (Sept. 18, 2008), <http://www.flclimatechange.us/ewebeditpro/items/O12F19812.pdf> (last visited Mar. 26, 2009). It strongly recommended, however, that Florida not pursue a one-state cap-and-trade program. *Id.*

80. See CAL. AIR RES. BD., CLIMATE CHANGE PROPOSED SCOPING PLAN (2008) [hereinafter SCOPING PLAN], available at <http://www.arb.ca.gov/cc/scopingplan/document/psp.pdf>.

81. The key additional measures include the following: enhancing energy efficiency measures for buildings and appliances; requiring California utilities to obtain 33% of their electric power from renewable sources; establishing incentives and GHG emissions standards for the transportation sector; implementing the Low Carbon Fuel Standard (which reduces the carbon intensity of transportation fuels sold in the state); and creating targeted fees, e.g., public goods charge on water use. *Id.* at ES-3 to ES-4.

82. *Id.* at 31.

83. *Id.*

84. *Id.* at 30.

85. *Id.* at 33. Allowance budgets for other WCI Partners will be established in the same way to allow each to achieve their own jurisdictional goal and the total WCI regional goal. *Id.*

86. CAL. ENERGY COMM. & CAL. PUB. UTILS. COMM., FINAL OPINION AND RECOMMENDATIONS ON GREENHOUSE GAS REGULATORY STRATEGIES 198 (2008), <http://www.energy.ca.gov/2008publications/CEC-100-2008-007/CEC-100-2008-007-F.PDF>. Although the joint opinion also discusses the natural gas sector, it does not make any specific recommendations at this time for contributions to AB 32's 2020 reduction goal beyond analyzing the potential for energy efficiency, such as utility programs, building codes, and appliance standards, affecting natural gas use, and solar hot water. *Id.* at 121-22.

87. SCOPING PLAN, *supra* note 80, at 37.

88. EFTA consists of Iceland, Lichtenstein, Norway, and Switzerland. They entered the scheme in 2008. See, e.g., Decision of the EEA Joint Committee No 146/2007, 2008 O.J. (L 100) 92 (setting out mechanisms linking Norway's and other EFTA countries' trading schemes to the EU-ETS). Discussions about linking the scheme with other Kyoto participants are ongoing.

89. Directive 2003/87/EC, 2003 O.J. (L 275) 32.

Development Mechanism and Joint Implementation,⁹⁰ that are allowed under Kyoto.

The EU-ETS requires Member States to develop national allocation plans (NAPs) which, among other things, cap the total allowable emissions of CO₂ from activities listed in the Directive from that country's covered installations.⁹¹ The cap, or number of allowances,⁹² is calculated by each Member State and subject to the approval of the European Commission.⁹³ Annex III of the Directive lays out the rules an NAP has to follow in setting the cap. Allowances must be consistent with (1) the Member State's path to achieving its Kyoto obligations,⁹⁴ (2) the technological potential, i.e., feasibility, of activities covered by the ETS to reduce emissions, and (3) other Community directives. Additionally, allowances can not discriminate between companies or sectors in violation of Articles 87 and 88 of the EC Treaty,⁹⁵ which prevent Member States from granting aid or using resources that would distort competition by favoring certain undertakings or activities in the market.

The NAP must also list all of the covered installations in the Member State and the allowances allocated to each. While the Directive requires Member States to freely allocate at least 95% of the allowances during the first phase (2005-2007), and 90% during the second phase (2008-2012),⁹⁶ the remaining distribution determinations are left to the discretion of each Member State. These include: (1) determining how many allowances should be allocated to each sector; (2) how sector allowances should be distributed amongst individual installations; and (3) whether historical emissions should be used as the basis for allocations to individual facilities or a benchmark level of the best practices in that sector.⁹⁷

90. The Kyoto Protocol established three market-based mechanisms for achieving emissions reductions: emissions trading; the Clean Development Mechanism (CDM); and Joint Implementation (JI). CDM and JI are methods to generate emission credits. CDM allows industrial countries to invest in emissions-reducing projects in developing countries (which are not subject to Kyoto targets) to generate credits; JI allows similar projects, but in other industrialized countries subject to Kyoto. In JI, the credits are subtracted from the other country's allowances. The EU amended the original directive in 2004 to allow Member States to use CDMs and JIs. See Directive 2004/101/EC, 2004 O.J. (L 338) 18.

91. See Directive 2003/87/EC, Annex I, 2003 O.J. (L 275) 42. Installations conducting the following activities are subject to regulation: combustion plants generating more than 20 MW of power, oil refineries, coke ovens, iron and steel plants, cement kilns, glass and ceramic manufacturers, and pulp and paper plants. *Id.* The mineral and paper industry activities have production capacity requirements before the installation is subject to the Directive. Other sectors, such as transportation, and other gases, such as methane, are not currently part of the program, although the Directive notes that it may be amended to include such sectors and gases at a later date. See Directive 2003/87/EC, art. 30(2)(a), 2003 O.J. (L 275) 40.

92. The Directive requires Member States to determine their total quantity of allowances and how they intend to allocate them. One allowance permits the emission of one tonne of CO₂e during a specified period. Directive 2003/87/EC, art. 3, 2003 O.J. (L275) 34. Thus, Member States cap the tonnage of emissions and allocate those polluting rights to permitted installations.

93. Directive 2003/87/EC, art. 9, 2003 O.J. (L 275) 35.

94. This should take into account (1) the proportion of overall emissions from covered activities in comparison to the emissions from sources not covered by the Directive, (2) national energy policies, and (3) the national climate change program.

95. Directive 2003/87/EC, Annex III(5), 2003 O.J. (L 275) 43 (prohibiting allowances that unduly favor one undertaking over another).

96. Directive 2003/87/EC, art. 10, 2003 O.J. (L 275) 36.

97. See VIVIAN E. THOMSON, PEW CTR. ON GLOBAL CLIMATE CHANGE, EARLY OBSERVATIONS ON THE EUROPEAN UNION'S GREENHOUSE GAS EMISSION TRADING

SCHEME: INSIGHTS FOR UNITED STATES POLICYMAKERS 10 (2006), http://www.pewclimate.org/docUploads/Early_Observations_on_EUETS_Thomson.pdf. This intra-state discretion manifests differently across nations. The Pew Center catalogues some of these differences in its Early Observation Report, noting:

- base year periods varied for calculating emission reductions (e.g., 1998 to 2002 for Denmark and 2001 to 2002 for The Netherlands);
- techniques for allocating among and within sectors included permutations of historic, projected, category-wide average, and installation-specific emissions, with some countries accounting for production levels as well;
- some countries used "grandfathering" (basing allocations on facility-specific emissions or production levels) while others used "benchmarking" (applying a benchmark based on, for example, average emission rates or rates associated with best available technology);
- most countries freely gave away their entire allocations, but Denmark, Hungary, Ireland, and Lithuania auctioned a percentage; and
- differing public access procedures have given rise to complaints in some countries about lack of transparency in the decision-making rules (e.g., in Germany, 700 appeals were filed protesting allowance allocation decisions due to lack of public involvement in the decision-making process).

Id. The effects of these different permutations are discussed in more detail *infra*.

98. Directive 2003/87/EC, arts. 4-6, 2003 O.J. (L 275) 35.

99. Directive 2003/87/EC, arts. 14-15, 2003 O.J. (L 275) 37.

100. See Commission Decision 2007/589/EC, 2007 O.J. (L 229) 1 (activity-specific guidelines for monitoring of GHG emissions).

101. Each registry is responsible for the accurate accounting of the issue, holding, transfer, and cancellation of allowances.

102. Directive 2003/87/EC, art. 19, 2003 O.J. (L 275) 37.

103. Directive 2003/87/EC, art. 16(3), 2003 O.J. (L 275) 37.

104. Directive 2003/87/EC, art. 16(2), 2003 O.J. (L 275) 37.

105. Directive 2003/87/EC, art. 28, 2003 O.J. (L 275) 39. Pooling allows firms to collectively meet an entire industry's emissions target by pooling their allowances (and trading accordingly).

106. Directive 2003/87/EC, art. 24(1), 2003 O.J. (L 275) 38.

107. Some issues are not discussed for brevity purposes. For example, credits under project mechanisms generated issues about the principle of supplementarity (unique to the Directive) and concerns about how much of an installation's account could be settled using credits from CDM projects. These are not discussed in this Article because they implicate the general theme discussed regarding the need for harmonization. Most sources cited herein address the issue of project mechanisms.

2. Problems and Responses

The EU-ETS encountered many problems during Phase I and into Phase II. Below are two overarching themes that touch upon most of the issues raised.¹⁰⁷

a. Overallocation

During the learning phase, it became apparent that almost all Member States overallocated, meaning that covered emitters received more emission allowances than they needed. Some opine that this resulted from freerider concerns accompanying multistakeholder projects that lacked centrally determined limits,¹⁰⁸ while others attribute it to inadequate emissions data and overly optimistic economic growth estimates.¹⁰⁹ Whatever the reason, it depressed the value of allowances. When the first year's emissions data revealed that most countries were far below their allowances, the market price of allowances plummeted, with most allowances being all but worthless by the end of the 2007 period.¹¹⁰

To address the overallocation of allowances, the Commission exercised more of its oversight role during the approval process for Phase II NAPs and only approved four Phase II NAPs without any changes (Denmark, France, Slovenia, and the United Kingdom (UK)); on average, it reduced individual caps by 10.5%.¹¹¹ Analysts predict that the current caps, as well as those projected by the Commission for Phase III (2013-2020), should ensure allowance prices sufficient to create a market for allowances, thus incentivizing the market to invest in clean technology.¹¹²

Since the economic slowdown, however, the price of allowances has started to drop as cash-strapped entities sell their allowances to raise funds, causing prices to reach a low of 8.05 euros in February from nearly 31 euros last July.¹¹³ Since there is less industrial output due to the recession, there are also fewer emissions, which lead to lower allowance prices.¹¹⁴ Some experts believe this shows that the scheme is working since prices are responding to market conditions, which means they should rise when the economy recovers. If prices fall to 5 or 6 euros over a sustained period, however, this could indicate that the scheme is not working to effectively reduce emissions.¹¹⁵

b. Competitiveness

Introduction of the EU-ETS raised various business competitiveness concerns that showcase the types of industry conflicts that may arise in the United States. First, there has been a concern about what is known as leakage, that is, businesses (and their emissions) avoiding regulation by relocating to non-Kyoto countries, e.g., the United States, or to developing countries that have no targets, i.e., China.¹¹⁶ This problem is often cited by industries as the reason for freely distributing allowances. If industries have to pay for their allowances, a "polluter-pays" type principle, the price of EU goods could increase and be eclipsed in the global market by goods produced by nonparticipating countries.¹¹⁷ Additionally, some entities cannot pass through compliance costs to end-users due to regulation,¹¹⁸ putting them at a competitive disadvantage. There is also no guarantee that Member States will recycle auction revenues to alleviate compliance costs or international competitiveness impacts, which means auction costs can become the equivalent of a tax.¹¹⁹ This explains why—despite being a potential source of revenue for Member States and the more economically efficient model for allocating allowances¹²⁰—only four countries auctioned a percentage of their allowances in Phase I.¹²¹

Whether auctioning will be included in future phases depends on political reactions in various Member States to industries profiting from free allowances during Phase I, litigation pressure from state aid complaints regarding discrimination in violation of Articles 87 and 88 of the EC Treaty, and progress on developing a coordinated approach to address industry's competitiveness concerns.¹²² Political reaction to increased electricity prices could shift opinions in favor of auctioning. And if Member States decided to distribute revenues from auctions to consumers as tax breaks, this could counteract industry efforts against auctioning.

A second, and related, business concern stems from the uncertainty generated by the degree of discretion each Member State has under the ETS and how that impacts the market. As mentioned earlier, the Directive enables Member States who do not want to disadvantage their industries to overallocate allowances, which can devalue the allowances and result in little to no impact on reducing GHG emissions. Similarly, the intra-state discretion regarding distribution determinations can negatively affect the markets. For example, a Mem-

108. Susan J. Kurkowski, *Distributing the Right to Pollute in the European Union: Efficiency, Equity, and the Environment*, 14 N.Y.U. ENVTL. L.J. 698, 716-17 (2006) (noting the prisoner-dilemma that Member States face when choosing to allocate their allowances).

109. See LARRY PARKER, CONG. RESEARCH SERV., CLIMATE CHANGE: THE EU EMISSIONS TRADING SCHEME (ETS) ENTERS KYOTO COMPLIANCE PHASE 2, 6 (2008), available at <http://www.usembassy.at/en/download/pdf/ets.pdf>.

110. *Id.* at 6. This was also due in part to the inability to carry allowances over into the subsequent phase. The next phase will allow banking into Phase III in an effort to address this. See *id.* at 5.

111. *Id.* at 4.

112. See Press Release, Deutsche Bank, Carbon Prices Must Rise in 2008-20 to Meet EU Policy Targets (June 2, 2008), http://www.db.com/presse/en/content/press_releases_2008_3930.htm?month=1 (revising its EUA estimate upwards to 40 euros and noting this should be sufficient to signal investment in carbon sequestration technology).

113. Nina Chestney, *EU Carbon Scheme Not Hurt by Low Prices, Yet*, REUTERS, Mar. 4, 2009, <http://www.reuters.com/article/GCA-GreenBusiness/idUSTRE52329R20090304?pageNumber=1&virtualBrandChannel=0>.

114. *Id.*

115. *Id.* According to a report by New Carbon Finance (NCF), the EU-ETS succeeded in reducing emissions in 2008, a decline of 3% from 2007. *Analysts Credit EU ETS With Helping Cut Emissions*, CARBON FIN., Feb. 18, 2009, <http://www.carbon-financeonline.com/index.cfm?section=europe&action=view&id=11857>. The price of carbon was responsible for 40% of this reduction, while the recession was responsible for 30%. *Id.*

116. PARKER, *supra* note 109, at 9.

117. *Id.* at 14. But see Cameron Hepburn et al., *Auctioning of EU ETS Phase II Allowances: How and Why?*, 6 CLIMATE POL'Y 137, 140-41 (noting that industry still passes along opportunity costs to end-users under a free allocation scheme and arguing that that undermines arguments against auctioning related to price increases).

118. PARKER, *supra* note 109, at 14. Some researchers have intimated that this may be an overstatement, that in fact, most sectors will profit from free allowances, regulations notwithstanding. See Hepburn, *supra* note 117, at 156 n.11.

119. PARKER, *supra* note 109, at 14.

120. Hepburn, *supra* note 117, at 137-38 ("[E]conomists almost unanimously recommend more auctioning . . . [B]usiness tends to oppose it. The result is that despite all the academic recommendations, auctioning in emission trading systems is the exception rather than the rule.")

121. *Id.* at 138.

122. *Id.* at 139-40.

ber State could favor one industry at the expense of others, or employ methodologies that allocate more (or fewer) allowances to a sector compared to another Member State's methodology, thereby disadvantaging one country's sector in the common market. Discretionary behavior can also affect investment and business development decisions.¹²³

The eruption of a global financial crisis has exacerbated competitive concerns among Member States, causing them to push for certain industries to be excluded from the EU-ETS.¹²⁴ For example, the British have argued that aviation should not be included in emission trading schemes; the Germans want heavy industry to be excluded; and Poland wants to exclude coal. Fears of a deep recession also have Member States worried about the extra costs to business during the Phase III compliance period where allowances will no longer come cheap. Businesses have threatened to take their investments and their more polluting activities out of Europe. A few European politicians, particularly from Germany, Italy, and the UK, began openly discussing the possibility of diluting, or even abandoning, the scheme when the financial crisis hit.¹²⁵

A final competitive concern involves the treatment of allocating allowances to new entrants to the system and to existing facilities that shut down. Member States usually include provisions for free allocations to new entrants to ensure they remain competitive when investment opportunities are available. The rules, however, vary across Member States for the amount of allowances kept on reserve for new entrants and the basis by which they are dispensed.¹²⁶ Similarly, there is no uniform method of dispensing allowances. One approach has been to distribute allowances on a first-come, first-serve basis if the reserve size is too small. Another approach is to guarantee that all new entrants will receive allowances and refill the reserve with purchases on the market. Like other distributional dissimilarities, market distortions result. When a facility closes, its former allocations are (usually) fed into the new entrant reserve instead of remaining as that company's assets.¹²⁷ This creates a disincentive for companies to shut down older, less efficient facilities to build newer, more efficient ones.¹²⁸ To address this problem, some countries have adopted transfer rules that permit companies to retain allowances for replacement facilities.¹²⁹ For Phase I, seven countries—Germany, Greece, Hungary, Luxembourg, the Netherlands, Poland, and the UK—included transfer rules in their NAPs. For Phase II, Cyprus, Flanders, and Malta also adopted transfer rules.

In response to discrepancies among EU members, the Commission proposed the "Climate Action and Renewable Energy Package": a series of EU-wide guidelines to set new

emission targets, harmonize allocation methods, and provide new rules on sequestration credits in preparation for Phase III of the ETS.¹³⁰ These guidelines were adopted—though with some significant amendments due to concerns raised by the economic crisis—by the European Parliament on December 17, 2008, in order to minimize damage to heavily impacted industries and to mitigate uncertainty for market participants in Phase III (beginning in 2013).¹³¹ The new legislation commits the EU to one EU-wide cap that reduces each year instead of 27 different national caps.¹³² Member States must reduce GHG emissions to 20% below 1990 levels by 2020.¹³³ Member States may exclude small installations, provided they are subject to equivalent emission reduction measures. Another salient change is that the free allocation of allowances will be standardized across the EU by a single set of rules. The hope is that this will create greater transparency. Auctioning will also be determined at the Commission level rather than the Member State level and the percentage of auctioned allowances will be much higher. In the power sector, 100% of allowances are to be auctioned in Phase III, except for specially exempted plants heavily dependent on coal (particularly those in eastern Europe), but free allowances for these plants must not exceed 70% of the Member's national allocations in 2013 and must be phased out by 2020. For the remaining sectors, 20% of allowances must be auctioned with a gradual increase to 100% by 2027 (except for those industries heavily susceptible to leakage, such as manufacturing, may be granted exemptions).¹³⁴ The amount of carbon credits permitted, including offset credits, is also increased to as much as 50% of reductions, but only unused credits from Phase II will be accepted.

The EU also passed legislation to include aviation in the EU-ETS starting in 2012, which will cover all flights to, from, or within the EU.¹³⁵ Some provisions, however, have been diluted in response to economic concerns. Airlines will receive 85% free allowances in the first year, but this may be reduced thereafter. Commercial air operators with low emissions, i.e., 10,000 metric tons of CO₂e, will be exempt.

3. Litigation

Most Phase I NAPs failed to significantly affect industries. This resulted primarily from overallocation, but also because Phase I was viewed as an exercise in "learning by doing" in preparation for Phase II (the Kyoto compliance period between

123. See THOMSON, *supra* note 97, at 12.

124. JOHNSON, *supra* note 16.

125. Chris Horner, New Europe, <http://planetgore.nationalreview.com/post/?q=NjVhNDcxMTRjMDcxNzg3MDBlNmVhMzA3ZDczYTRiZGU=> (Sept. 22, 2008, 10:45 EST).

126. PARKER, *supra* note 109, at 15-16. For example, reserve size varies across Member States, ranging from only 0.4% of allowances in Poland to 26% in Malta in Phase I. This spread continued during Phase II, where Poland reserved only 3.2% while Latvia reserved 45%. *Id.* at 15.

127. *Id.* at 17.

128. *Id.*

129. *Id.* at 18.

130. For a summary of the proposal, see PEW CTR. ON GLOBAL CLIMATE CHANGE, EUROPEAN COMMISSION'S PROPOSED "CLIMATE ACTION AND RENEWABLE ENERGY PACKAGE": JANUARY 2008, at 1-2 (2008), <http://www.pewclimate.org/docUploads/EU-Proposal-23Jan2008.pdf>. The proposal and supporting documents are available at http://ec.europa.eu/environment/climat/climate_action.htm (last visited Mar. 26, 2009).

131. ECOMETRICA PRESS, SUMMARY PAPER: EUROPEAN UNION EMISSIONS TRADING SCHEME, 1 (2008), http://www.ecometrica.co.uk/wp-content/uploads/Summary_Paper_-_EU_Emissions_Trading_Scheme_Updated_December_2008.pdf.

132. *Id.*

133. *Id.* at 2. The EU committed to increasing its commitment to 30% if global agreement is reached on similar reductions for other developed countries. *Id.*

134. *Id.* The Commission will determine which sectors may be exempted from auctioning by the end of 2009 and will review the exemptions every five years thereafter. Installations will only be exempted if "necessary and proportionate." *Id.* at 2 n.4.

135. *Id.* at 3.

2008 and 2012). Consequently, there was little to no litigation arising out of Phase I NAPs. Member States and industries, however, have initiated suits in response to the more stringent NAPs approved by the Commission for Phase II. The legal arguments generally revolve around issues of discrimination, distribution of power between Member States and the Commission, and concerns about the methodology and data used to calculate allowances.¹³⁶ Due to the significant backlog in the European Court system, however, few cases have been decided by the court. The few cases that have been decided include the UK's challenge to upwardly amend its allocations, Germany's challenge to have ex-post amendments allowed, and two industry challenges to NAPs that were dismissed for a "lack of direct concern."¹³⁷

a. Discrimination

Nine Member States challenged the Commission's allowances determinations for their Phase II NAPs on the grounds that the decisions are discriminatory and will unduly harm their growing economies.¹³⁸ Generally, the argument pled is that "the application of the method of calculation devised by [the Commission] to determine the total volume of greenhouse gas emissions allowed disadvantages the Member States with low total emissions."¹³⁹ Member States claim that this violates the EC Treaty's principle of nondiscrimination.¹⁴⁰ The cases are pending before the European Court of First Instance and probably will not be heard for a few years.¹⁴¹ In the interim, Member States are required to comply with the disputed NAPs.

The Commission's recent proposals for Phase III appear to address some of the concerns raised in these suits.¹⁴² For instance, the Commission proposes individual targets for Member States' non-ETS sectors (which account for about

60% of EU GHG emissions) based on per capita gross domestic products (GDPs). This will allow increases above 2005 levels for those with low per capita GDPs and require reductions for those with high per capita GDPs. Targets for the non-ETS sectors will average about 10% below 2005 levels.

Industry has also filed discrimination-based complaints. These cases claim that NAPs discriminated between companies or sectors in a way that unduly favored one industry over another in violation of the EC Treaty's prohibition against state aid.¹⁴³ For example, in *EnBW Energie Baden-Württemberg AG v. Commission*,¹⁴⁴ one of the main German energy producers, EnBW Energy Baden Württemberg AG (EnBW), challenged the transfer rule for replacement facilities under Germany's NAP as giving an unfair advantage to its principal competitor, and thus constitutes unwarranted state aid within the meaning of Article 87(1) of the EC Treaty. EnBW argued that by permitting its competitor, RWE, to retain allowances from its old conventional combustion installations that were replaced with new ones, RWE had obtained, free of charge, a surplus of allowances (because of the more efficient, new installations) that it could then sell on the market. EnBW contended that this placed it at a competitive disadvantage because it has more nuclear power stations than old, conventional combustion stations, and therefore cannot gain as much of a benefit from the transfer rule compared to its competitors like RWE. The court, however, dismissed EnBW's claim based on procedural grounds because EnBW had no interest in bringing the proceedings against the Commission. The Commission had not authorized the NAP in its entirety, which would produce binding legal effects on EnBW, even if the Commission had accepted the transfer rule portion of the NAP.

The Commission has subsequently clarified the role of state aid for environmental protection purposes in response to these (and other) concerns,¹⁴⁵ issuing new environmental aid guidelines. These guidelines set out a formal balancing test for use in designing state aid rules and for legal analysis in state aid cases:

- Is the aid measure aimed at a well-defined objective of common interest (the relevant common interest objective here is the protection of the environment)?
- Is the aid well designed to deliver the objective of common interest (i.e., is aid the appropriate policy instrument, is there an incentive effect, is the aid measure proportional to the beneficial effect)?
- Are the distortions of competition and effect on trade limited, so that the overall balance is positive?¹⁴⁶

These guidelines are designed to increase legal certainty and transparency of the Commission's decisionmaking.

136. All arguments are based upon violations of the Articles of the Treaty Establishing the European Community (EC Treaty) or procedural irregularities in implementing the Directive. The EC Treaty was amended on Dec. 13, 2007, but the relevant principles are still applicable. Only the substantive arguments are addressed herein; however, Case T-499/07, *Bulgaria v. Comm'n*, 2008 O.J. (C 64) 50 (action brought Dec. 27, 2007), is a good example of how parties are alleging that procedural irregularities warrant annulment.

137. See Case T-27/07, *US Steel Košice v. Comm'n*, 2007 ECJ CELEX LEXIS 676 (dismissing for lack of direct concern); Case T-13/07, *Cemex UK Cement v. Comm'n*, 2007 ECJ CELEX LEXIS 832 (same); Case T-374/04, *Germany v. Comm'n*, 2007 ECJ EUR-Lex LEXIS 2287 (annulling the Commission's refusal to allow Germany to include measures for ex-post adjustment).

Disputes concerning EU directives can be brought in EU courts or in Member State courts. Electronic access to foreign national judgments is limited and complicated by language barriers. The UK's reporters, however, were canvassed, and the nature and disposition of cases involving the ETS mirrored those in the European system. Consequently, this Article only discusses the European cases.

138. Emily Schilling, *European Countries Challenge Denial of 163 Million Emissions Allowances*, CLIMATE INTEL, Jan. 17, 2008, <http://climateintel.com/2008/01/17/european-countries-challenge-denial-of-163-million-emissions-allowances/>. The countries include Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, and Slovenia. *Id.*

139. Case T-369/07, *Latvia v. Comm'n*, 2007 O.J. (C 269) 67. See also Case T-32/07, *Slovakia v. Comm'n*, 2007 O.J. (C 69) 29; Case T-483/07, *Romania v. Comm'n*, 2008 O.J. (C 51) 56.

140. Case T-369/07, *Latvia v. Comm'n*, 2007 O.J. (C 269) 67.

141. The European Court is substantially backlogged. Moreover, the Court denied Poland's petition for expedited review. Case T-183/07 R, *Poland v. Comm'n*, 2008 O.J. (C 8) 16 (denying petition to stay implementation).

142. See PEW CTR. ON GLOBAL CLIMATE CHANGE, *supra* note 130, at 4.

143. State aid is analogous to U.S. subsidies and is prohibited in the common market because of their discriminatory effects. See EC Treaty, art. 87.

144. Case T-387/04, *EnBW Energie Baden-Württemberg AG v. Comm'n*, 2007 E.C.R. II-01195.

145. Notice, Community Guidelines on State Aid for Environmental Protection, 2008 O.J. (C 82) 1 (clarifying proper role of state aid for environmental protection purposes).

146. *Id.* at 5.

Despite these planned improvements, however, the onset of the global financial crisis is likely to lead to additional disputes. As the Commission seeks to include new sectors in Phase III that are experiencing heavy blows from the economic downturn, these sectors will likely raise complaints of unfairness, arguing that they may be forced to downsize or go out of business due to the additional costs imposed by the EU-ETS scheme. The aviation industry, for example, has already raised such protests in light of the Commission's proposal in December 2006, to include the aviation industry in the scheme during Phase III.¹⁴⁷ Conversely, as EU Member States look to exclude certain industries from the EU-ETS due to the downturn, more discrimination complaints are likely to arise. The Commission recently indicated that the aluminum, steel, and cement sectors are "likely to be strongly affected [and] would therefore be amongst the substances likely to benefit from partial to totally free allocations" in the next phase.¹⁴⁸

b. Distribution of Power

Another persistent theme concerns the level of decentralization of power in implementing the EU-ETS. This issue primarily involves how much power the Commission has under the EC Treaty to countermand Member States' NAP allocations of allowances. Claims have been filed in court raising this issue. Under the Emissions Trading Directive, the Commission was granted the power to review and reject NAPs although it is the Member States that set their own NAP allocations. This power can come into conflict with the EU's principles of subsidiarity and conferral espoused in Article 3(b) of the EC Treaty. Under these principles, the Member States retain significant national sovereignty.¹⁴⁹ Thus, in these disputes, Member States (or industries)¹⁵⁰ essentially claim that Commission decisions altering NAPs infringe upon the Member State's sovereign rights to manage its economy in violation of the EC Treaty.¹⁵¹

c. Inadequate Data and Methodologies

A set of cases were also filed by companies in the cement industry in Poland objecting to, among other things, the manner in which the Commission determined Poland's NAP.¹⁵² Specifically, Polish cement companies objected that the Commission

relied upon "out-of-date data concerning the forecast growth of the GNP [for Poland], using too general data for calculating the CO₂ emission index."¹⁵³ The cement industry (as well as Poland) argues in these cases that the Commission adopted too low a GDP growth rate and too stringent an emission reduction ratio for Poland. Such concerns may be alleviated under the Phase III proposals, which call for the adoption of more transparent, standardized methodologies that are based on verified emissions.

B. U.S. Acid Rain Program

Due to the structural differences between the EU and the United States, it is helpful to look at the Acid Rain cap-and-trade program, a U.S. domestic program, and the challenges that were made to that program. Given that one likely candidate for administering a federal GHG cap-and-trade scheme is EPA, which also administers the Acid Rain Program, the Acid Rain Program decisions are useful precedent in assessing future challenges to Agency actions under emerging cap-and-trade schemes.

I. Overview

In response to the problem of acid rain, Congress amended the CAA in 1990.¹⁵⁴ The amendments set a goal of reducing annual SO₂ emissions by 10 million tons below 1980 levels.¹⁵⁵ To achieve these reductions, the law required a two-phase tightening of the restrictions placed on fossil fuel-fired power plants. Phase I began in 1995 and affected 445 electric utility plants located across the United States. Phase II (2000) tightened emissions limits and expanded its coverage to include smaller power installations. The program regulates over 2,000 existing utility units serving generators with an output capacity of greater than 25 MW and all new utility units.¹⁵⁶

Unlike the EU-ETS, a central authority (Congress) statutorily capped allowances and delegated distribution determinations to EPA.¹⁵⁷ EPA auctioned 2.8% of the allowances;¹⁵⁸ the remaining allowances are freely distributed to installations based on their historic fuel consumption and a specific emissions rate calculated by EPA.¹⁵⁹ Utility units can trade and bank their allowances, but they are not allowed to emit at hazardous levels (as set out in the CAA) no matter how many allowances they obtain. Each unit must continuously measure and record its emissions, usually using a continuous emission monitoring (CEM) system. CEMs report hourly emissions data to EPA on a quarterly basis. This data is used in the

147. *Global Airlines Blast EU ETS Decision*, EURACTIV, Oct. 27, 2008, <http://www.euractiv.com/en/transport/global-airlines-blast-eu-ets-decision/article-176679> (last visited Mar. 26, 2009).

148. *EU Climate Goals Under Pressure as Recession Looms*, EURACTIV, Sept. 26, 2008, <http://www.euractiv.com/en/climate-change/eu-climate-goals-pressure-recession-looms/article-175773> (last visited Mar. 26, 2009).

149. The EU reserves to Member States powers not expressly conferred by treaties to the exclusive use of the Union.

150. See, e.g., Case T-195/07, *Lafarge Cement Comm'n v. Comm'n*, 2007 O.J. (C 170) 37 (claiming the Commission usurped Poland's power to submit its own NAP infringing upon the principle of cooperation). The principle of cooperation is an ancillary principle to the principle of subsidiarity.

151. See, e.g., Case T-369/07, *Latvia v. Comm'n*, 2007 O.J. (C 269) 67 ("[T]he Commission has significantly restricted the sovereign rights of the Republic of Latvia in relation to energy, in particular, as regards its choice of energy sources and as regards the supply of electrical energy, thus disregarding the powers set out in Article 175(2)(c) of the EC Treaty.")

152. See Case T-198/07, *Cementownia Warta v. Comm'n*, 2007 O.J. (C 170) 39; Case T-199/07, *Cementownia Odra v. Comm'n*, 2007 O.J. (C 170) 39; Case

T-203/07, *Cemex Polska v. Comm'n*, 2007 O.J. (C 170) 40. All actions were filed on June 5, 2007.

153. Case T-195/07, *Lafarge Cement Comm'n v. Comm'n*, 2007 O.J. (C 170) 37.

154. Clean Air Act Amendments of 1990, Pub. L. No. 101-549, 104 Stat. 2399.

155. U.S. EPA, Acid Rain Program, <http://www.epa.gov/airmarkets/progsregs/arp/basic.html> (last visited Mar. 26, 2009) (summarizing 42 U.S.C. §§7651 et seq., the Air Pollution Prevention and Control Acid Deposition Control).

156. *Id.*

157. Clean Air Act Amendments of 1990 §406(b), Pub. L. No. 101-549, 104 Stat. 2399, 2633 (setting a 5.60 million ton per year cap).

158. U.S. EPA, Acid Rain Allowance Auction Fact Sheet, <http://www.epa.gov/airmarkets/trading/factsheet-auction.html> (last visited Mar. 26, 2009).

159. U.S. EPA, *supra* note 155.

Emissions Tracking System, a centralized emissions data bank available for industry to facilitate market trading.¹⁶⁰

2. Problems and Litigation

The Acid Rain Program did not raise many of the problems faced by the EU-ETS for obvious reasons: it regulated emitters from only a few entities in one sector.¹⁶¹ Also, although states in the United States reserve regulatory power, the hazardous conditions of lakes across the United States due to polluting entities in various jurisdictions clearly fall within the federal power to regulate. Thus, few power plays manifested in response to this scheme although, as discussed below, there were several states that adopted their own regulations, and a New York law was preempted by the federal program.

a. Federal Preemption

Some eastern states most affected by acid rain promulgated their own regulations. For instance, New Hampshire passed the Acid Rain Control Act in 1985 to reduce emissions of SO₂ from stationary sources (power plants and industrial facilities) in the state by 25% and set an annual SO₂ emissions cap on major sources. New Hampshire also enacted the Clean Power Act, passed in 2002 and amended in 2006, calling for an 87% reduction in SO₂ emissions and a 70% reduction in NO_x emissions from 1999 levels. Likewise, the New York State Department of Environmental Conservation adopted emergency regulations in 2004 to reduce acid rain pollutants in the state. The Acid Deposition Reduction Program requires certain electric generators in the state to reduce emissions of SO₂ and NO_x to protect sensitive areas, such as the Adirondack and Catskill mountains, from the effects of acid rain. Specifically, the generators must reduce SO₂ emissions to 50% below Phase 2 (2000) levels of the federal acid rain program. The SO₂ reductions were phased in beginning January 1, 2005, through January 1, 2008. New Hampshire and New York's caps have not been challenged on federal preemption grounds. This is likely due to the fact that states are allowed under the CAA to impose stricter pollution controls.¹⁶²

In *Clean Air Markets Group v. Pataki*, a New York law that restricted the transfer of SO₂ emission credits to upwind states in order to cut back on the SO₂ emissions that reached New York was challenged on the ground that the law was preempted by CAA.¹⁶³ The U.S. Court of Appeals for the Second Cir-

cuit agreed, finding that the New York law would undermine the nationwide transfer of allowances by effectively banning allowance sales by New York utilities to a utility in an upwind state.¹⁶⁴ This, according to the Second Circuit, interfered with the CAA goal to establish a national allowance market to reduce emissions of SO₂ by restricting the nationwide quality of the system.¹⁶⁵

b. Administrative Challenges

Most opposition to the U.S. Acid Rain Program has come from challenges to the administrative process. These challenges generally have taken two forms: claims that the EPA exceeded its statutory authorization; and challenges to the allowance determinations as arbitrary and capricious.¹⁶⁶

In almost every reported decision involving the Acid Rain Program, the courts deferred to the Agency determination.¹⁶⁷ For example, in *Texas Municipal Power Agency v. EPA*, the U.S. Court of Appeals for the District of Columbia (D.C.) Circuit dealt with the issue of allocation of initial allowances under the Acid Rain Program.¹⁶⁸ A utility named AMP-Ohio asserted that it was shortchanged under the allocation system because the emission rates for its facility were calculated from a statewide average instead of that facility's actual emission rate.¹⁶⁹ Under the *Chevron* two-prong test, the D.C. Circuit held that EPA's emission rate calculation was entitled to deference.¹⁷⁰ Under the first prong of the *Chevron* test, the court concluded that since the CAA was silent on this exact issue, EPA's decision was consistent with the statute. Second, EPA's decision was deemed reasonable because rather than deny all allowances to the facility due to AMP-Ohio's failure to submit the necessary supporting data for its actual emission rate, EPA calculated the allowances based on an alternative, verifiable fact, i.e., the statewide average.¹⁷¹

164. *Id.*

165. *Id.*

166. Under the Administrative Procedure Act, the grounds for challenging final Agency determinations are limited. See 5 U.S.C. §706.

167. See, e.g., *Texas Mun. Power Agency v. EPA*, 89 F.3d 858 (D.C. Cir. 1996) (rejecting the utilities claim in holding that EPA's interpretation to use emission rates calculated from a statewide average in determining initial entitlements was not unreasonable because EPA's calculation was based on a factually verifiable alternative); *Monongahela Power Co. v. Reilly*, 980 F.2d 272 (4th Cir. 1992) (reversing district court injunction against EPA, stating that EPA's interpretation that they had discretion for when to review and process extension proposals was reasonable, and thus under *Chevron*, the district court should have deferred to the Agency); *Indianapolis Power & Light Co. v. EPA*, 58 F.3d 643 (D.C. Cir. 1995) (holding that EPA's decision to not adjust a utility unit's emissions data in special circumstances was reasonable to bolster certainty as to benefits of participation in the voluntary extension allowance program). But see *Madison Gas & Elec. Co. v. EPA*, 25 F.3d 526 (7th Cir. 1994) (finding the Agency determination about initial allowances unreasonable under canons of construction).

168. 89 F.3d 858.

169. *Id.* at 868.

170. See *Chevron, U.S.A., Inc. v. Natural Res. Def. Council*, 467 U.S. 837 (1984). "First, always, is the question whether Congress has directly spoken to the precise question at issue. If the intent of Congress is clear that is the end of the matter . . . [I]f the statute is silent or ambiguous with respect to the specific issue, the question for the court is whether the agency's answer is based on a permissible construction of the statute." *Id.* at 842-43. The U.S. Supreme Court stressed that the power of a court to review agency interpretation of the statute is not a license for the court to impose its own policy or logistical preferences for those of the agency.

171. 89 F.3d at 869-70.

160. *Id.*

161. One local scheme in Texas is also worth mentioning since it, like the Acid Rain Program, regulated only one gas emitted by relatively few entities. The Mass Emissions Cap and Trade Program (MECT) was adopted on December 6, 2000, and imposed a mandatory annual NO_x emission cap in Houston-Galveston-Brazoria nonattainment areas for major source facilities or where the site collectively has the potential to emit 10 tons or more per year of NO_x. The MECT program began on January 1, 2002, and has a declining cap, with a final cap level set in 2007. Texas Commission on Environmental Quality, Mass Emissions Cap and Trade Program, http://www.tceq.state.tx.us/implementation/air/banking/mass_ect_prog.html (last updated Nov. 25, 2008). The program called for an ambitious 80% reduction in NO_x from 1997-1999 baselines and has functioned rather smoothly.

162. See 42 U.S.C. §7416.

163. 338 F.3d 82, 87-88 (2d Cir. 2003).

IV. Likely Litigation

As the previous section illustrates, there are areas where new cap-and-trade systems in the United States will likely generate controversy. This controversy stems in large part from the fact that cap-and-trade programs involve balancing competing interests among the various sources of GHG emissions, and against the interests of other entities who are invested in lower emissions overall. In the case of GHG cap and trade, there are a wide range of stakeholders, including states, non-governmental organizations, and private companies, across a range of industries. Many of these stakeholders are actively working to shape the design of the emerging cap-and-trade programs to their benefit. Stakeholders who are disappointed with the ultimate program design may shift their efforts to the courtroom. Although the legal construct of the challenges will differ from the EU-ETS due to differences in governing laws, the core themes are likely to be the same, and as with the Acid Rain Program, a GHG cap-and-trade program is likely to face a number of administrative challenges. Such programs may also make it easier for private climate change litigation to take hold.

Below we discuss four broad categories of litigation that likely will develop following the enactment of federal cap-and-trade legislation or other GHG regulatory program: (1) challenges to the new federal program; (2) challenges to the competing state and regional programs; (3) actions enforcing the new federal program; and (4) related civil litigation among stakeholders.

A. Challenges to Anticipated Federal Programs

Entities or sectors that believe that they will disproportionately bear the costs of new GHG regulations could seek to raise discrimination arguments similar to those raised against the EU-ETS. These entities, however, will have to rely on provisions of the U.S. Constitution instead of Articles of the EC Treaty. A direct challenge to a federal cap-and-trade scheme will be difficult since the Commerce Clause explicitly gives Congress plenary power to the federal government to regulate interstate commerce.¹⁷² That said, Congress' power to regulate interstate commerce is not entirely unfettered. It is limited by the Due Process Clause of the Fifth Amendment in two ways: restraints on trade may not be arbitrary and capricious; and just compensation must be given when private property is taken under the Commerce Clause.¹⁷³ But such claims are difficult to establish because the courts have generally been hesitant to limit Congress' authority to regulate interstate commerce.¹⁷⁴

172. U.S. CONST. art. I, §8, cl. 1, 3.

173. 3 CHESTER JAMES ANTIEAU & WILLIAM J. RICH, MODERN CONSTITUTIONAL LAW § 44.18 (2d ed. 1997). James Antieau and William Rich also identify a third limit on Congress' power to regulate commerce: the requirement that enforcement actions have adequate procedural safeguards. This element, which applies uniformly to all enforcement proceedings, is outside the scope of this Article.

174. See *Hodel v. Virginia Surface Mining & Reclamation Ass'n, Inc.*, 452 U.S. 264, 276 (1981) ("The task of a court that is asked to determine whether a particular exercise of congressional power is valid under the Commerce Clause is relatively narrow.")

To establish that the federal government has exceeded its authority under the Commerce Clause, a litigant must prove that Congress did not act "rationally" in adopting the particular regulatory scheme.¹⁷⁵ Regulation of GHG emissions, which are produced by fossil fuel products that are traded in interstate commerce and whose emissions impact the greater environment, would appear to pass this test on its face.¹⁷⁶ Theoretically, federal legislation that shows blatant favoritism—such as a program that includes specific geographic boundaries—could be vulnerable to such an argument. For example, the substitute amendment for the Lieberman-Warner Bill included as a covered facility "any facility that is a natural gas processing plant or that produces natural gas in the State of Alaska," while omitting natural gas facilities in other states.¹⁷⁷ Natural gas producers in Alaska may take the position that drawing such a limit is not rationally related to the goal of mitigating the effects of GHG emissions.¹⁷⁸ This is especially so given the global nature of climate change. GHG emissions from around the world commingle in the atmosphere, and while they may have a cumulative effect, emissions from no single source can be linked to any one effect. Therefore, if the stated goal of the legislation is to protect the environment from the effects of climate change, there is no scientific basis for making such geographic distinctions.

The second limitation on Congress' power under the Commerce Clause is the Takings Clause of the Fifth Amendment, which provides that the government shall not take private property for public use "without just compensation." A statute can constitute a "taking" if it "denies an owner economically viable use of his land."¹⁷⁹ This is what is referred to as a regulatory taking. Owners of carbon-intensive natural resources

175. *Hodel*, 452 U.S. at 276. See also *Katzenbach v. McClung*, 379 U.S. 294 (1964) (federal statute which created a conclusive presumption that all restaurants meeting certain criteria affect commerce was not arbitrary).

176. See *Hodel*, 452 U.S. at 282 (upholding the Surface Mining Control and Reclamation Act as proper regulation under the Commerce Clause because coal is a commodity that moves in interstate commerce and the Commerce Clause permits regulation of activities causing air or water pollution or other environmental hazards which affect more than one state). But see *Solid Waste Agency of N. Cook County v. U.S. Army Corps of Eng'rs*, 531 U.S. 159, 172-74 (2001) (rejecting *Chevron* deference to the Corps' rule extending definition of "navigable waters" under Clean Water Act to include intra-state waters used as habitat by migratory birds which cross state lines because it would raise constitutional questions as to whether such regulation falls within Congress' power under the Commerce Clause).

177. S. 3036, 110th Cong., §4(7)(B). The bill also contains a provision requiring EPA to promulgate rules within two years to expand the scope of the statute to all producers of natural gas. *Id.* §1204.

178. See Letter from Mark D. Myers, Director, U.S. Geological Survey, to Dale Hall, Director, U.S. Fish and Wildlife Service (May 14, 2008), available at http://www.fws.gov/home/feature/2008/polarbear012308/pdf/Memo_to_FWS-Polar_Bears.PDF (stating that it is "beyond the scope of existing science to identify a specific source of CO₂ emissions and designate it as the cause of specific climate impacts at an exact location").

179. *Penn Central Transp. Co. v. New York City*, 438 U.S. 104, 138 n.36 (1978). *Penn Central* identified several factors—including the regulation's economic impact on the owner, the extent to which it interferes with distinct investment-backed expectations, and the character of the government action—that are used to determine whether a regulation effects a taking. *Lingle v. Chevron U.S.A. Inc.*, 544 U.S. 528, 528-29 (2005). Outside of the *Penn Central* ad hoc inquiry, the Court has determined that there are two situations (outside of the special context of land use exactions) where regulatory actions are considered per se takings: (1) where government requires an owner to suffer a permanent physical invasion of her property, see *Loretto v. Teleprompter Manhattan CATV Corp.*, 458 U.S. 419 (1982); or (2) where regulations completely deprive an owner of

rights could argue that the cap-and-trade program unlawfully devalues the regulated resources without just compensation. The strength of such an argument will depend on the specific contours of the regulation, its economic impact on the value of the resources, and an assessment of the “character of the government action.”¹⁸⁰ But given that it is very difficult to succeed on a regulatory takings challenge, courts are unlikely to be receptive to such arguments.¹⁸¹

The resulting implementing regulations are the more likely source for challenges.¹⁸² But in the absence of the actual legislation and regulations, it is difficult to predict what regulatory structure and scheme will emerge. It is not yet known, for example, whether EPA, the Federal Energy Regulatory Commission (FERC), or perhaps a combination of the two will be tasked with administering the program.¹⁸³ It also is not known whether federal regulation will come in the form of direct regulation under the CAA or under a new federal cap-and-trade scheme.¹⁸⁴ Whatever the approach, there will inevitably be administrative challenges.

Once rules are adopted, legal challenges similar to those brought against the Acid Rain Program are likely to occur. For example, those challenging the new regulations may claim that the implementing agency has exceeded its statutory author-

ization or otherwise violated the terms of the implementing statute. For example, both the Boxer-Lieberman-Warner Bill and the House Discussion Draft delegate authority to EPA to determine whether certain facilities fall within the scope of the program.¹⁸⁵ Such sensitive decisions may be challenged as being in conflict with the intent of the statute or as being arbitrary and capricious.¹⁸⁶

Disappointed stakeholders may also bring traditional challenges to the rulemaking process followed by the agency, such as an allegation of failure to adhere to the notice provisions of the Administrative Procedure Act.¹⁸⁷ Another allegation could be the failure of the agency to adhere to the National Environmental Policy Act (NEPA)¹⁸⁸ in its preparation of an environmental impact statement (EIS).

Entities could also challenge allowance determinations as arbitrary and capricious, and others may claim that the new EPA rules are disproportionately burdensome if some major GHG emitters are not covered by those rules.¹⁸⁹ Such challenges, as discussed in the preceding section, would be governed by the highly deferential *Chevron* test, making it difficult for them to prevail.

Administrative challenges are even more likely to occur if GHG regulation occurs under the CAA. Comments to the ANPR, for example, suggest that a nationwide GHG program under the CAA would require novel statutory interpretations that have not been yet tested in court. For example, the U.S. Department of Energy (DOE) points out that the courts have not yet ruled on EPA’s ability to regulate GHG emissions from stationary sources under §111 of the CAA through a market-based mechanism like cap and trade.¹⁹⁰

In addition, Congress’ failure to make clear in new cap-and-trade legislation that it is the exclusive federal scheme for regulating GHGs could result in challenges to the new scheme

“all economically beneficial use” of her property, *Lucas v. South Carolina Coastal Council*, 505 U.S. 1003, 1019 n.8 (1992).

180. *Hodel*, 452 U.S. at 295 (explaining that the Court has established no “set formula” for determining when “justice and fairness” require that economic injuries caused by public action be compensated by the government,” and that such evaluations are typically made through “ad hoc, factual inquiries” with respect to a specific property).

181. *See, e.g., Keystone Bituminous Coal Ass’n v. DeBenedictis*, 480 U.S. 470 (1987) (holding that the Subsidence Act prohibiting coal mining in certain areas where there was a risk of subsidence was not a regulatory taking because it was aimed at preventing a public nuisance and it did not completely prevent the petitioners from mining coal on any parcel of land). The Court has only found regulatory takings where regulatory actions are functionally equivalent to a direct appropriation of or ouster from private property. *See Lucas*, 505 U.S. 1003 (holding that a regulation denying an owner’s development rights on beach front property worth over \$1 million was a compensable taking because it rendered the property valueless with no economically viable use remaining); *Loretto*, 458 U.S. 419 (holding that New York law requiring landlords to permit cable television installation on their property was a permanent physical occupation, and thus a compensable taking); *Pennsylvania Coal Co. v. Mahon*, 260 U.S. 393 (1922) (holding that a regulation prohibiting coal removal to prevent subsidence “went too far,” and thus constituted a taking, because it completely destroyed the petitioner’s coal mining business).

182. Much of the action will occur during the rulemaking process as potentially impacted entities try to shape and influence the scope and shape of the regulations.

183. The House Discussion Draft proposes a hybrid structure under which EPA would be responsible for administering the cap-and-trade program and FERC would oversee the trading market for allowances and offsets. *See Discussion Draft*, *supra* note 23, §761. FERC’s expertise in energy economics may be more suitable for GHG emissions regulation than EPA’s Clean Air Markets Division, which was in charge of the Acid Rain Program.

184. Jim Efstathiou Jr., *Obama to Declare Carbon Dioxide Dangerous Pollutant*, BLOOMBERG, Oct. 16, 2008, http://www.bloomberg.com/apps/news?pid=20601087&sid=a2RHlj_6hvV0&refer=home. *See also* Opinion, *Obama’s Carbon Ultimatum*, WALL ST. J., Oct. 20, 2008, at A18, available at <http://online.wsj.com/article/SB122445812003548473.html>. As discussed earlier, the Supreme Court charged EPA in *Massachusetts v. EPA* with the responsibility to regulate GHG emissions from motor vehicles under the CAA. The Supreme Court’s conclusion that GHGs meet the CAA definition of an “air pollutant” requires EPA to determine whether GHGs endanger public health or welfare, which would then trigger EPA’s rulemaking process to regulate GHGs under the CAA. Further, the decision affects whether other sources of GHG emissions besides motor vehicles would need to be regulated under the CAA as well, including establishing permitting requirements for stationary sources of air pollutants. In response to the decision, EPA issued its proposed rules in an ANPR. ANPR, *supra* note 8.

185. S. 3036, 110th Cong., §1102(1)(A) (definition for “affected facility” includes “(i) a covered facility; (ii) another facility that emits a greenhouse gas, as determined by the Administrator; and (iii) at the option of the Administrator, a vehicle fleet with emissions of more than 10,000 carbon dioxide equivalents in any year, assuming no double-counting of emission”). Discussion Draft, *supra* note 23, §713 (definition of “covered facility”).

186. *See also North Carolina v. EPA*, 531 F.3d 896 (D.C. Cir. 2008) (holding that EPA’s Clean Air Interstate Rule (CAIR) violated the CAA).

187. 5 U.S.C. §553.

188. 42 U.S.C. §4321-4370d, ELR STAT. NEPA §§2-209. Suits could also be brought against emitters for failing to comply with these provisions. For example, a settlement was reached this year in one of the earliest climate change lawsuits filed in 2002 by Friends of Earth, Greenpeace, and three U.S. cities alleging noncompliance with NEPA. In *Friends of Earth et al. v. Mosbacher et al.* (now *Spinelli et al.*), Civ. No. 02-4106, N.D. Cal. 2002, plaintiffs sought declaratory and injunctive relief, alleging that the United States Export-Import Bank (ExIm) and the Overseas Private Investment Corporation (OPIC) failed to conduct required environmental reviews under NEPA for overseas projects that emit GHGs.

189. Administrative challenges are also likely to be brought against state agency determinations pursuant to the regional and state cap-and-trade schemes, such as RGGI, WCI, MGGRA, and AB 32. Because WCI, MGGRA, and AB 32 will have a greater impact on a variety of industries, it is likely that more challenges will be made to these programs than to the RGGI.

190. ANPR, *supra* note 8, at 44368. DOE notes that the D.C. Circuit vacated EPA’s only attempt so far to establish a cap-and-trade program under §111 of the CAA by implementing the Clean Air Mercury Rule (CAMR) for new and existing coal-fired electricity-generating units. *Id. See New Jersey v. EPA*, 517 F.3d 574 (D.C. Cir. 2008). The D.C. Circuit, however, vacated based on grounds unrelated to EPA’s authority to implement such a program. Nevertheless, the legal uncertainty of that authority still remains.

on the grounds that the CAA governs GHGs in light of the Supreme Court's determination that GHGs are air pollutants under the CAA. This will be especially true if, as President Obama's advisors suggest, President Obama pushes to have EPA classify CO₂ as a dangerous pollutant under the CAA.¹⁹¹ Such a lawsuit would essentially be a continuation of—or repeat of—*Massachusetts v. EPA*. The House Discussion Draft anticipates this problem by providing that GHGs are prohibited from being regulated as criteria pollutants or hazardous air pollutants under the CAA.¹⁹² New source review under the CAA would also not apply to GHGs.

Other challenges are likely to arise, such as disputes over ambiguities in statutory language, disputes over offset programs, securities litigation related to disclosure of financial risks associated with compliance, and stockholder derivative actions. The complexity of players, interaction among overlapping schemes, and unpredictability in enforcement will certainly provide ample grounds for a variety of legal challenges to emerging cap-and-trade systems, some of which can not yet be anticipated.

B. Challenges to State and Regional Programs

Enactment of a federal cap-and-trade program would immediately raise questions regarding the future of the burgeoning state and regional programs. Whether the state and regional programs can co-exist with a federal level program will directly raise issues of federalism and preemption.

The Supremacy Clause provides that the Constitution is the “supreme Law of the Land.”¹⁹³ Under this clause, the federal government can explicitly preempt state and local governments from legislating in the same area. Thus, Congress could answer the “co-existence” question by explicitly preempting the state and regional programs.

At this point, it seems unlikely that a federal climate change law, if enacted, will contain an express preemption provision. Most federal environmental laws, including the CAA, do not invoke explicit preemption.¹⁹⁴ To the contrary, they explicitly encourage states to enact stricter programs.¹⁹⁵ Federal environmental laws often use a savings clause, which would specifically preserve certain areas of regulation for the states, to help stave off preemption challenges. The House Discussion Draft, for example, contains an explicit savings clause for state and

regional programs with more stringent regulations, but suspends such programs from 2012-2017 to give the federal market time to develop.¹⁹⁶ Such a clause would allow emerging state and regional regulatory schemes to continue after 2017, but there would be less incentive to do so with a functioning federal market. The scope and reach of such a provision, however, is likely to be tested. State and local governments have invested significant time and resources into building their own programs. California, in particular, may push against federal encroachment in regulating in this area, even if its program is only suspended, since a federal program may undermine California's ability to meet its more stringent caps.¹⁹⁷

Even if a federal bill does not expressly exclude state and regional trading schemes from preemption, challenges are also likely to arise on preemption grounds if the regional or state programs conflict with either a new federal emissions trading scheme or GHG regulation under the CAA.¹⁹⁸ This is especially so if the regional programs are more burdensome than those at the federal level. And even if Congress expressly allows for state and regional GHG regulatory schemes, such as the RGGI, WCI, MGGRA, or AB 32, a preemption challenge could still be brought against such programs on the grounds that they impede the federal scheme's emissions trading purpose.¹⁹⁹ This is what happened in the *Pataki* acid rain case, dis-

196. Discussion Draft, *supra* note 23, §861. The draft bill also instructs EPA to issue rules to exchange California and RGGI allowances issued before the end of 2011 for federal allowances. The Boxer-Lieberman-Warner Bill also explicitly stated that it would not preempt state or regional initiatives, but states could not adopt programs that set lower limits than the federal program. S. 3036, 110th Cong., §1741. As reported out of the committee, S. 2191 included a provision making clear that states are not preempted from enacting and enforcing GHG emission reduction requirements that are more stringent than the federal legislation. The substitute amendment went further by encouraging transition to the federal scheme, although it did not mandate a phase-out of state or regional programs. For example, states with their own schemes, such as those participating in RGGI, WCI, MGGRA, or AB 32, would not be eligible for state allowances under the federal scheme unless they transition to the federal program. *Id.* §625. But if they do transition, they would likely qualify as “States That Have Led the Nation in Efforts to Reduce Greenhouse-Gas Emissions,” and would be entitled to a greater percentage of the allowances allocated to states. The amendment also included two mechanisms to facilitate transitioning to the federal program. First, RGGI offsets could be transferred into the federal program, and second, entities that purchased RGGI or AB 32 allowances would receive early action allowances at amounts that compensate them for the cost of the regional or state allowances. *Id.* §§312(b)(4), 704. The amendment did not specifically include transition mechanisms tied to WCI or MGGRA because these initiatives were in their early stages of development at the time. Similar WCI and MGGRA mechanisms, however, are likely to be included in future legislative action.

197. CA Governor's Exec. Order No. S-20-06 (Oct. 18, 2006), available at <http://gov.ca.gov/executive-order/4484> (describing the “leadership role” California has taken on climate change issues and its efforts to “urge[] the President, Congress, the U.S. Department of State, and other federal agencies to include the interests and expertise of the states as part of any national debate on the impacts of and efforts to reduce greenhouse gas emissions to ensure fully coordinated policies”).

198. Alternatively, if entities choose to comply with federal standards and face enforcement actions for not complying with state or regional programs, they could defend using similar preemption arguments or the political question doctrine.

199. There are at least three ways in which preemption of local law may be accomplished: (1) express preemption, where Congress expressly declares its intention to preclude state regulation in a given area; (2) implied field preemption when the federal law is “sufficiently comprehensive to make reasonable the inference that Congress ‘left no room’ for supplementary state regulation,” *Bedford Affiliates v. Sills*, 156 F.3d 416, 425-27 (2d Cir. (N.Y.) 1998) (citing *Hillsborough County v. Automated Med. Labs., Inc.*, 471 U.S. 707, 713 (1985)); and (3) implied conflict preemption where a state law is preempted “to the extent that it actually conflicts with a valid federal statute.” *Ray v. Atlantic Richfield Co.*, 435 U.S. 151, 158 (1978). Conflict preemption occurs either when “compliance

191. Private citizens or environmental groups might also use the citizen suit provisions of the CAA to challenge new legislation if they feel that the cap-and-trade system is not stringent enough to curb GHG emissions by claiming that the government is failing to meet its obligations under the CAA and the *Massachusetts* decision.

192. Discussion Draft, *supra* note 23, §§831-833.

193. U.S. CONST. art. VI, cl. 2.

194. See 42 U.S.C. §7416.

195. See, e.g., 42 U.S.C. §9614(a) (CERCLA); 42 U.S.C. §6929 (RCRA); 33 U.S.C. §1370 (Clean Water Act). Where Congress has the authority to regulate private activity under the Commerce Clause, the Court has recognized Congress' power to offer states the choice of regulating that activity according to federal standards or having state law preempted by federal regulation. *Hodel*, 452 U.S. at 288. This arrangement, which has been termed “a program of cooperative federalism,” *id.* at 289, is replicated in numerous federal statutory schemes. See, e.g., *Arkansas v. Oklahoma*, 503 U.S. 91, 101 (1992) (CWA “anticipates a partnership between the States and the Federal Government, animated by a shared objective”).

cussed above, which struck down the New York law restricting allowance sales to upwind states.

The *Massachusetts* decision may make such challenges more difficult, at least with respect to the issue of whether states may promulgate vehicle GHG emissions standards. In *Central Valley Chrysler-Jeep, Inc. v. Goldstone*,²⁰⁰ the court rejected the auto dealers' preemption arguments against California's GHG emissions standards for new motor vehicles, which were also adopted by other states. The court held that "both EPA and California . . . are equally empowered through the Clean Air Act to promulgate regulations that limit the emission of greenhouse gases, principally carbon dioxide, from motor vehicles."²⁰¹ The court relied on the *Massachusetts* decision, granting EPA the authority to regulate GHGs as air pollutants under the CAA, and on an earlier decision by the Vermont District Court in *Green Mountain Chrysler v. Crombie*,²⁰² which upheld Vermont's right to regulate GHG emissions from new vehicles. According to the court in *Central Valley*, California could issue and enforce its own emissions standards for new vehicles in the state, but only if granted a preemption waiver under §209 of the CAA. And while EPA under the George W. Bush Administration, shortly after the decision, denied California's waiver request,²⁰³ President Obama issued an Executive Order soon after his inauguration directing EPA to reconsider the denial.²⁰⁴

Additionally, regional schemes that attempt to link their cap-and-trade programs to those of foreign governments, e.g., the linkage between AB 32 and WCI, may implicate the dormant Foreign Relations Clause. This clause holds that the federal government has the ultimate authority to create foreign policy, and any state law that impedes such policy is unconstitutional, even if there is no direct conflict with a specific foreign agreement.²⁰⁵ Thus, schemes such as WCI and AB 32 could be challenged on the grounds that they interfere with U.S. foreign policy. Such a challenge could be made even if Congress fails to undertake GHG regulation.²⁰⁶ And such a challenge strengthens, if, as we anticipate, Congress enacts legislation regulating GHG emissions.

with both federal and state regulations is a physical impossibility," *Florida Lime & Avocado Growers, Inc. v. Paul*, 373 U.S. 132, 142-43 (1963), or where state law "stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress." *Hines v. Davidowitz*, 312 U.S. 52, 67 (1941).

200. 529 F. Supp. 2d 1151 (E.D. Cal. 2007).

201. *Id.* at 1189.

202. 508 F. Supp. 2d 295 (D. Vt. 2007).

203. California sued EPA to overturn its denial and is also pursuing congressional relief. The case is still pending in the U.S. Court of Appeals for the Ninth Circuit. California's AB 32 program relies heavily on the state's ability to implement these limits on motor vehicles.

204. Ken Bensinger & Jim Tankersley, *Obama Directs EPA to Reconsider Bush-Era Auto Emission Policy*, L.A. TIMES, Jan. 26, 2009, <http://www.latimes.com/news/nation-world/nation/la-na-emissions27-2009jan27,0,1766221.story>; Tom Doggett, *EPA Reconsidering California's Car Emissions Waiver*, REUTERS, Feb. 6, 2009, <http://www.reuters.com/article/GCA-BusinessofGreen/idUSTRE51549X20090207>.

205. *American Ins. Ass'n v. Garamendi*, 539 U.S. 396, 414 (2003). In *Garamendi*, the Supreme Court set up a two-step analysis to determine if a state law is preempted based on the dormant foreign relations power. *Id.* at 420. The first step asks whether the state statute involved a traditional state interest. If not, the Court suggested the law should be preempted whether or not the federal government has acted. If it did, the Court employs a balancing test, weighing the strength of the foreign policy interest against the importance of the state concern.

206. See generally Erwin Chemerinsky et al., *California, Climate Change, and the Constitution*, 37 ELR 10653, 10659-64 (Sept. 2007).

In addition, entities in states that are not participants in the regional schemes,²⁰⁷ but are nonetheless unfairly affected by the regulations, e.g., perhaps by anti-leakage provisions, could challenge the regional schemes, relying on the dormant Commerce Clause to claim discrimination. Under the dormant Commerce Clause, which prevents states from usurping Congress' authority to regulate interstate commerce, states cannot discriminate against citizens of other states "simply to give a competitive advantage to in-state businesses,"²⁰⁸ and they are prohibited under the clause from regulating beyond their own jurisdiction.²⁰⁹ According to a prominent constitutional scholar, Erwin Chemerinsky, challenges to anti-leakage provisions that treat entities not governed by the program differently have a good chance of succeeding:²¹⁰ "If California aims to stop leakage by treating electricity generated outside of the state differently than electricity generated inside its borders, the state will almost certainly lose when facing a lawsuit based on dormant Commerce Clause grounds."²¹¹

One recent lawsuit takes a different approach with respect to discrimination challenges to regional schemes. In *Indeck Corinth v. Paterson*,²¹² a natural gas-fired cogeneration plant sued New York, challenging the state's RGGI regulations as unconstitutional under the Due Process Clause and Equal Protection Clause.²¹³ Indeck claims that its constitutional rights have been violated because it is unable to pass through the costs of allowances onto its customers because it is bound by a long-term fixed-price contract for electricity with the New York City utility Consolidated Edison. The suit alleges that although RGGI does provide for the allocation of some allowances to plants subject to fixed-price contracts, these are inadequate for all of the plants disadvantaged by such contracts.

C. Enforcement Actions

Each of the cap-and-trade proposals include requirements that covered facilities report and/or reduce emissions over time.²¹⁴ They also contain provisions regulating allowance trading

207. The same claim could be raised by entities in states outside of California that will be affected by any anti-leakage provisions associated with AB 32's cap-and-trade program. This is a particular concern in California because it purchases approximately one-quarter of its electricity from outside the state. See *id.* at 10655.

208. *Granholt v. Heald*, 544 U.S. 460, 472 (2005).

209. If a state law either discriminates against out-of-staters or is extraterritorial, courts will apply a strict scrutiny standard. *Healy v. Beer Inst., Inc.*, 491 U.S. 324, 336-37 (1989). If the state law is evenhanded toward out-of-staters or attempts to regulate within its borders, a balancing test is applied. *Pike v. Bruce Church, Inc.*, 397 U.S. 137, 142 (1970). If the law regulates evenhandedly for a legitimate local public interest, and its effects on interstate commerce are only incidental, it will be upheld, unless the burden clearly exceeds the local benefits. *Id.*

210. See generally Chemerinsky, *supra* note 206, at 10654-59.

211. *Id.* at 10655.

212. *Indeck Corinth v. Paterson*, No. 2009369 (N.Y. Sup. Ct. Jan. 29, 2009).

213. Gerald B. Silverman, *Emissions Trading: Cogeneration Plant Sues New York to Overturn State's RGGI Regulations*, DAILY ENV'T REP., Jan. 30, 2009. Indeck's lawsuit also raised a claim that RGGI's multi-state agreement itself should be overturned under the Compact Clause because it was never approved by Congress. It also claimed that the state's regulations are inconsistent with the federal Public Utility Regulatory Policies Act (PURPA) and are preempted by PURPA and regulations of FERC.

214. See S. 3036, 110th Cong., §1103; Discussion Draft, *supra* note 23, §713; RGGI MODEL RULE §XX-8 (2007), available at http://rggi.org/docs/model_rule_corrected_1_5_07.pdf; WCI Design Recommendations, *supra* note 72, at 6;

activity.²¹⁵ Inevitably, there will be entities who fail to comply strictly with these requirements and consequently, there will be enforcement actions.

The Boxer-Lieberman-Warner Bill provided for an enforcement provision that is similar to other federal environmental statutes. It authorizes EPA to bring a civil action, and obtain a civil penalty of up to \$25,000 per day of violation, to enforce any violation of the Act against any “owner or operator” of a facility that is subject to the Act.²¹⁶ The terms “owner” and “operator” are not defined in the bill. But, based on EPA’s administration of other environmental statutes, it is safe to anticipate rulemaking that contains very broad definitions for these terms.²¹⁷ The House Discussion Draft also provides for applicability of the CAA’s enforcement provisions to GHGs.²¹⁸ It also gives FERC the authority to enforce the rules it must promulgate for allowance and offset trading markets.²¹⁹ FERC can issue cease and desist orders and can collect the higher of \$1 million or treble damages and restitution against those who violate its regulations.

Enforcement need not only come from the government. If new federal GHG emissions legislation specifically contains a citizen suit provision, as the Boxer-Lieberman-Warner Bill and House Discussion Draft do,²²⁰ this would expand the potential for enforcement actions by increasing the total number of possible prosecutors. And if GHG regulation is instead pursued under the CAA, such citizen suits are already authorized.²²¹ Such citizen suit provisions give private plaintiffs an avenue to sue those who fail to comply with newly-promulgated GHG emission standards. Under the CAA’s citizen suit provision, for example, a private citizen can bring a lawsuit to compel EPA to fulfill its rulemaking obligations, and it permits a private lawsuit to enforce the statute against another citizen or corporation. In a citizen suit, the court may grant an injunction, impose penalties, and award attorneys fees and litigation costs. Additionally, the House Discussion Draft specifically provides that damages and legal fees may be awarded.

The House Discussion Draft also contains reporting requirements and even some provisions for criminal enforcement. Thus, stakeholders could be vulnerable to enforcement actions for false reporting to the government or knowingly

engaging in market manipulation, with fines of up to \$25 million or imprisonment for up to 20 years.²²²

D. Civil Litigation

While climate change litigation has been described as “the next tobacco” and “the most dangerous litigation” in the United States,²²³ civil tort litigation in the United States relating to climate change and GHG emissions has been limited. This is due in large part to the absence of federal legislation. In the last couple of years, a handful of lawsuits have been filed in federal court against companies, claiming that their emissions of GHGs have contributed to global warming. These suits, which rely on common-law theories, such as public nuisance, have repeatedly been dismissed under the political question doctrine, which holds that courts can decline to act on cases involving issues that are best resolved through the political process.

Enactment of federal legislation is likely to accelerate civil litigation in this area for several reasons.²²⁴ First, as is discussed in the following section, the very existence of federal legislation will eliminate the political question defense that has thus far stymied these civil suits. Second, the debate over and enactment of legislation, which is likely to be a lengthy and involved process, will draw public attention to the issue of climate change in a very direct way. Increased public attention may generate increased litigation. Finally, legislation will constitute a formal statement from the federal government that the emission of GHGs is harmful, and the very existence of such a statement can be extremely powerful.²²⁵ While this fact has been touted by interest groups for years and has been directly and indirectly acknowledged by federal agencies in recent years, it has not yet been confirmed in federal law.

Below we discuss legal theories that are likely to be raised in climate change civil litigation.

I. Public Nuisance Cases

In *Connecticut v. American Electric Power Co.*,²²⁶ eight states and three land trusts filed lawsuits against five major U.S.

MGGRA Recommendations, *supra* note 77, at 14-16; SCOPING PLAN, *supra* note 80, at 108-09.

215. See S. 3036 §§2101-2104; Discussion Draft, *supra* note 23, §761; RGGI MODEL RULE §XX-6; WCI Design Recommendations, *supra* note 72, at 10; MGGRA Recommendations, *supra* note 77, at 9-14; SCOPING PLAN, *supra* note 80, at 34-38.

216. S. 3036 §1106.

217. See, e.g., 42 U.S.C. §9607(a)(1), (2) (liability of owners and operators under CERCLA).

218. Discussion Draft, *supra* note 23, §337.

219. *Id.* at §761.

220. The bills adopted the enforcement provisions of the CAA. See 42 U.S.C. §7604(a)(2) (“[A]ny person may commence a civil action on his own behalf . . . against the Administrator where there is alleged a failure of the Administrator to perform any act or duty under this chapter which is not discretionary with the Administrator.”); Discussion Draft, *supra* note 23, §336 (permitting citizens to bring suit for climate change-related harm resulting from a violation of the CAA or that slowed the pace of implementation of CAA regulation of GHGs or for failure of EPA to perform nondiscretionary duties).

221. Notably, the *Massachusetts* decision directly relied upon this procedural right afforded by the CAA in explaining its expansion of standing. See 549 U.S. 497, 516-17.

222. Discussion Draft, *supra* note 23, §761(f).

223. *Climate Change and the Threat of Litigation: The Most Dangerous Litigation in America: Free Speech Under Attack*, GLOBAL WARMING LITIG. BRIEFING UPDATE (Am. Justice P’ship, Lansing, Mich. & Se. Legal Found., Atlanta, Ga.), May 14, 2008, available at http://www.legalreforminthenews.com/2008PDFS/AJP-SLF_Kivalina_5-13-08.pdf. See also Stephan Faris, *Conspiracy Theory*, ATLANTIC, June 2008, at 32, available at <http://www.theatlantic.com/doc/200806/conspiracy>.

224. In order to preempt arguments that the federal cap-and-trade program preempted civil litigation relating to GHG emissions and climate change, the Lieberman-Warner Bill specifically provided: “An excess emissions penalty due and payable by the owner or operator of a covered facility under this subsection shall not diminish the liability of the owner or operator for any fine, penalty, or assessment against the owner or operator for the same violation under any other provision of this Act or any other law.” S. 3036, 110th Cong., §1203(a)(5).

225. The Boxer-Lieberman-Warner Bill provided express Congressional Findings on the dangers of GHG emissions as follows: “Congress finds that— (1) unchecked global warming poses a significant threat to—(A) the national security and economy of the United States; (B) public health and welfare in the United States; (C) the well-being of other countries; and (D) the global environment.” S. 3036 §2(1).

226. 406 F. Supp. 2d 265 (S.D.N.Y. 2005).

utilities, alleging that as the five largest emitters of CO₂ in the United States, the utilities contribute to the public nuisance of global climate change. The utilities filed motions to dismiss these suits, arguing that the relief sought would circumvent global warming policies set by the president and Congress in violation of constitutional separation-of-powers principles, i.e., plaintiffs raise a nonjusticiable political question that should be resolved by Congress.²²⁷ The district court agreed, dismissing the suits under the political question doctrine because global warming implicates foreign policy concerns that are consigned to the federal political branches, not the judiciary.²²⁸ Plaintiffs have appealed the decision to the Second Circuit.²²⁹

Similarly, in *Comer v. Murphy Oil USA, Inc.*,²³⁰ Mississippi residents filed suit in 2005 against oil, coal, utility, and chemical companies, alleging that their GHG emissions contributed to global climate change, which intensified Hurricane Katrina and resulted in damages to plaintiffs. The U.S. District Court for the Southern District of Mississippi dismissed the case against all defendants in August 2007, on the grounds that the suit would violate the political question doctrine and that plaintiffs lacked standing.²³¹ The plaintiffs appealed that decision to the U.S. Court of Appeals for the Fifth Circuit in September 2007, which is currently pending.

In October 2006, the state of California filed a similar lawsuit, *California v. General Motors*,²³² against six automobile manufacturers, alleging that GHG emissions from defendants' vehicles constituted a public nuisance. Although this case involved monetary damages instead of the equitable relief sought in the *Connecticut* case, the court held that the issue was nonjusticiable because it "would require an initial policy determination of the type reserved for the political branches of

227. Under Article III of the Constitution, federal court jurisdiction is limited to "cases" and "controversies." No justiciable "controversy" exists when a party seeks adjudication of a political question. *Massachusetts v. EPA*, 549 U.S. 497, 516 (2007). Determining whether a political question exists depends on six independent factors, asking whether there is or has been:

- 1) a textually demonstrable constitutional commitment of the issue to a coordinate political department; or
- 2) a lack of judicially discoverable and manageable standards for resolving it; or
- 3) the impossibility of deciding without an initial policy determination of a kind clearly for nonjudicial discretion; or
- 4) the impossibility of a court's undertaking independent resolution without expressing lack of the respect due coordinate branches of the government; or
- 5) an unusual need for unquestioning adherence to a political decision already made; or
- 6) the potentiality of embarrassment from multifarious pronouncements by various departments on one question.

Vieth v. Jubelirer, 541 U.S. 267, 277-78 (2004) (quoting *Baker v. Carr*, 369 U.S. 186, 217 (1962)). Several recent global warming lawsuits have been dismissed based on an assessment of these factors. District courts have struck down such suits because the issue of global warming is a question that the federal political branches are better equipped to address.

228. 406 F. Supp. 2d at 274.

229. The court heard oral argument on June 7, 2006 and the appeal is still pending.

230. *Comer v. Murphy Oil USA, Inc.*, No. 05-CV-0436 (S.D. Miss. Aug. 30, 2007).

231. Lack of standing is another barrier that climate change plaintiffs have had difficulty overcoming. Article III requires a plaintiff who sues in federal court to allege an injury that is "fairly traceable" to the defendant's wrongful conduct and that may be redressed by a judicial decision. The difficulty is in showing that the plaintiff's harm was caused by the emissions of defendants rather than those of other third parties. *See, e.g., Native Village of Kivalina v. Exxon Mobil Corp.*, No. CV-08-1138 (N.D. Cal. Feb. 26, 2008), discussed *infra*.

232. 2007 U.S. Dist. LEXIS 68547 (N.D. Cal. Sept. 17, 2007).

the government."²³³ The court also cited to the *Massachusetts* decision for support for its conclusion,²³⁴ but noted that *Massachusetts* still validated states' standing to bring administrative challenges to EPA's rulemaking decisions.²³⁵ An appeal of this decision is also pending in the U.S. Court of Appeals for the Ninth Circuit.

As noted above, all three of the above cases are on appeal pending before different U.S. circuit courts of appeal. A reversal of any of the decisions could trigger additional follow-up litigation. Moreover, should Congress enact federal climate change legislation, the basis for the dismissals in all three cases would disappear.

While plaintiffs' attorneys may view the passage of federal legislation as a "green light" to begin filing a wave of lawsuits, wise attorneys will look before they leap. Plaintiffs will face extraordinary challenges in proving causation.²³⁶ As discussed above, GHGs by their nature commingle in the atmosphere and their impacts are only felt on a global level. No single emission of GHGs can be linked to any individual injury.

2. Conspiracy and Concert of Action

The plaintiffs in the most recently filed climate change tort action, *Native Village of Kivalina v. Exxon Mobil Corporation*,²³⁷ specifically designed their complaint to avoid some of the challenges to bringing a public nuisance claim. The city and native village of Kivalina, Alaska, brought suit in February 2008, against 23 energy sector companies, claiming that defendants' GHG emissions have melted sea ice near the village, causing storms and erosion. Plaintiffs alleged that defendants' GHG emissions constitute a nuisance under both federal and state law, and seek monetary damages up to \$400 million for the costs of relocating the village.

In addition to claims for nuisance, the *Kivalina* plaintiffs also brought claims for civil conspiracy and concert of action. They alleged that certain defendants engaged in agreements to mislead the public as to the science behind global warming and to delay public awareness of the issue, and also that the defendants have worked in concert by giving each other substantial assistance and encouragement in their respective emissions of GHGs. The conspiracy claim echoes the plaintiffs' strategy in tobacco litigation. This is no coincidence, as two of the *Kivalina* plaintiffs' counsel (Steve Susman and Steve Berman) also were prominent counsel in the largest tobacco settlement. The defendants have filed a number of motions to dismiss raising the political question doctrine and other issues, which are pending before the court. Given the previous unsuccessful common-law suits due to the political question doctrine, it is likely that the *Kivalina* case will suffer the same fate.

Some legal scholars, however, have argued that the *Massachusetts* decision has substantially broadened the scope of

233. *Id.* at *29.

234. *Id.* at *34 (citing *Massachusetts v. EPA*, 549 U.S. 497 (2007)).

235. *Id.* at *36.

236. The recent decision by the Rhode Island Supreme Court to dismiss a case against the manufacturers of lead paint further narrows the public nuisance doctrine. *State v. Lead Indus. Ass'n, Inc.*, 951 A.2d 428 (R.I. 2008).

237. No. CV-08-1138 (N.D. Cal. Feb. 26, 2008).

standing to sue over global warming in federal court, which may assist these tort-based actions in overcoming the political question doctrine.²³⁸ In addition, new life may be brought to such actions once new regulatory schemes are established because the federal or state governments would now set a standard for how much GHG emissions are permitted. Nevertheless, there may still be standing problems with these suits even after a regulatory framework has been established because of the requirement that an injury be “fairly traceable” to the defendant’s wrongful conduct.²³⁹ Such suits will also still have to overcome significant hurdles in establishing causation. Moreover, new regulatory standards for future emissions would not assist claims based on past emissions because there would still be no agreed-upon metric by which to judge past emissions.

3. Shareholder Suits

Another likely area of litigation for public companies is shareholder suits challenging the company’s practices on disclosing the risks of climate change. The issue of what publicly traded companies should be disclosing regarding the risk of climate change has been under debate for several years. This debate has produced no clear answers and thus far, the regulatory agencies are not taking steps to clarify the issue.²⁴⁰ The New York Attorney General Andrew Cuomo has sought to shed some light on the issue. In September 2007, he served subpoenas against at least five energy companies seeking information on the companies’ analyses and disclosures to investors regarding climate change risk.²⁴¹ In August 2008, the New York Attorney General announced a settlement with Xcel Energy to provide more detailed disclosure in its Form 10-K about risks the company faces as a result of climate change.²⁴² And on October 23, 2008, Dynege Inc. (Dynege) became the

second company to enter into a groundbreaking agreement with the Attorney General for New York to provide structured disclosures of material risks associated with climate change in its Annual Report on Form 10-K.²⁴³ The subpoenas to the other three companies are believed to be still pending.

In the absence of Securities and Exchange Commission guidance, disclosure practices by U.S. companies have varied widely, but appear to be heading toward a trend of providing more detailed, specific climate change disclosure. The Carbon Disclosure Project (CDP), an independent not-for-profit organization that collects climate change data, reports that in 2008, corporations in the United States continued an upward trend toward providing more detailed disclosures on climate change, including disclosures of actual GHG emissions and reduction strategies.²⁴⁴ The CDP reported further that more companies are trending away from providing a generic statement regarding climate change risks, and moving toward providing a statement on personalized risks that are specific to the company.

The passage of federal climate change legislation places renewed interest on the present and historical disclosure practices of public companies that are directly affected by the program.

4. Insurance Liability Suits

Another risk-related issue is the likelihood of disputes between insurance policyholders and insurers regarding whether existing and past general liability policies will indemnify companies against global warming suits.²⁴⁵ With the potential for more GHG litigation and the potential for federal rulemaking that classifies CO₂ as a dangerous pollutant under the CAA, courts may need to decide whether CO₂ is a “pollutant” under policies’ pollution exclusions, whether old policies will cover new climate claims, and whether the effects from climate change are covered as “accidents or occurrences” under most general liability policies.²⁴⁶

An insurance dispute is already under way between one of the defendants in the *Kivalina* case, AES Corporation, and its insurer, Steadfast Insurance Company.²⁴⁷ Steadfast has filed an action for declaratory relief in a Virginia state court seeking a ruling that it is not liable for the global warming claims under AES’ policy. Thus, the outcome of the *Kivalina* case could have far-reaching consequences for climate change stakeholders.

238. See, e.g., Andrew Long, *Standing & Consensus: Globalism in Massachusetts v. EPA*, 23 J. ENVTL. L. & LITIG. 73, 103-05 (2007) (“Importantly, the Court rejected the notion that EPA’s decision was shielded from review as a political determination because ‘while the President has broad authority in foreign affairs, that authority does not extend to the refusal to execute domestic laws.’”) (quoting *Massachusetts*, 549 U.S. at 535). This author suggests that *Massachusetts* could be “a jumping-off point for greater judicial consideration of domestic regulation of global problems, and, perhaps, international regimes addressing those problems.” *Id.* at 122. Although it is unclear whether *Massachusetts* only broadened the scope of state standing for global warming regulation, it could be interpreted to expand the reach of citizen suits. *Id.* at 116.

239. See *supra* note 231.

240. On September 18, 2007, a group of state officials, state pension fund managers, and environmental organizations petitioned the Securities and Exchange Commission (SEC) for interpretive guidance to clarify whether companies are required to disclose material information relating to climate change under existing regulations. California Public Employees’ Retirement System et al., Petition for Interpretive Guidance on Climate Risk Disclosure, Sept. 18, 2008, available at <http://www.incr.com/Document.Doc?id=187>. On October 23, 2008, a coalition of 14 of the nation’s largest institutional investors sent a letter to the SEC requesting SEC guidance on a standardized format for climate risk disclosure. See Letter from Anne Stausboll et al. to Florence Harmon, Acting Director, Securities and Exchange Commission (Oct. 23, 2008), available at <http://www.ceres.org/Document.Doc?id=376>. The SEC has not responded to either inquiry.

241. See N.Y. Office of the Attorney General, Energy Company Subpoenas: Letters From Attorney General Cuomo, http://www.oag.state.ny.us/media_center/2007/sep/sep17a_07.html (last visited Mar. 27, 2009).

242. *In re Excel Energy Co.*, AOD #08-012, Assurance of Discontinuance Pursuant to Executive Law §63(15), Aug. 26, 2008, available at http://www.oag.state.ny.us/media_center/2008/aug/xcel_aod.pdf.

243. *In re Dynege Inc.*, AOD #08-132, Assurance of Discontinuance Pursuant to Executive Law §63(15), Oct. 23, 2008, available at http://www.oag.state.ny.us/media_center/2008/oct/dynege_aod.pdf.

244. See PRICEWATERHOUSE COOPERS & CARBON DISCLOSURE PROJECT, CARBON DISCLOSURE PROJECT REPORT 2008: GLOBAL 500 (2008), available at <http://www.cdproject.net/reports.asp> (click hyperlink entitled “CDP Global 500 Report 2008”).

245. Erin Fuchs, *Insurance Fights Could Heat Up Amid Warming Suits*, LAW360, Feb. 5, 2009, <http://environmental.law360.com/articles/84432>.

246. *Id.*

247. *Id.*

V. Conclusion

This Article attempts to look into the future to anticipate “climate change litigation” in a cap-and-trade world. Such an exercise in fortune-telling is inherently fraught with peril and only time will tell whether these predictions are fulfilled. Despite the risks, the exercise is an important one because these programs and related legislation are still in their formative stages. Drafters of legislation who keep these risks in mind now will be better prepared to defend the final program. Stakeholders who correctly anticipate program vulnerabilities can use these weaknesses to successfully argue their position to legislators now, or alternatively, to prepare to argue their position in court later.