Chapter 1

The Climate Change Debate:
Is Congress Ready to Take the Heat?

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The issue of climate change is, without a doubt, the “hot” environmental topic of the year, and very likely the decade. The change in control of the Congress, state initiatives, litigation, and even the 2008 Presidential Campaign all have changed the dynamics of the debate on climate change. The question is no longer “if” Congress will act to pass legislation, but rather “when” will it act and “what” that legislation look like. In the past six months alone, the Supreme Court has issued a landmark decision holding that carbon dioxide can be regulated as an air pollutant, members of Congress have introduced dozens of climate change bills and held numerous hearings, and the Administration has announced its intention to set standards for new motor vehicles. Whatever ultimately happens, either on Capitol Hill or in the regulatory process, the impacts and opportunities for the coal industry can be significant and are definitely worth monitoring closely.2

§ 1.01. Background — The Key Pillars of U. S. Climate Change Policy to Date.

To put the latest climate change developments in perspective, this section briefly describes the major components of U.S. Climate Change policy, beginning with the 1992 ratification of an international convention on climate change and including the President’s most recent pronouncements on this global issue.

The 1992 U. N. Framework for the Convention on Climate Change (UNFCCC), which was ratified by the United States, called for voluntary actions by industrialized countries to stabilize their emissions of greenhouse

2 A caveat: The climate change debate is evolving rapidly. Numerous developments have occurred since this chapter was first drafted, and will continue to occur between now and the date of publication. For the most part, therefore, this chapter represents a snapshot in time, with that time being early June 2007.
GHGs at 1990 levels by 2000. The U.S. and most of the world failed to meet this goal.

The 1997 Kyoto Protocol, which was negotiated pursuant to the UNFCCC, commits major industrialized countries that join it to legally binding emissions reductions. President Clinton signed the Protocol but never submitted it to the Senate for ratification. In 1998, the U.S. Senate unanimously passed a Sense of the Senate Resolution rejecting the Kyoto Protocol. The Kyoto Protocol went into force in February 2005, without the participation of the U.S. Over 160 nations and economic regional integration organizations have ratified it. The European Union (EU) began its program to implement the Protocol, the EU Emissions Trading Scheme (ETS), in 2005.

In 1998, the Senate unanimously passed a Resolution (the Byrd-Hagel Resolution), which stated that the Senate would not ratify an environmental treaty if it does not include all the nations of the world in some way, and if it does economic damage to our country.³

During the 2000 campaign, Candidate George W. Bush indicated his willingness to include carbon dioxide in a multi-pollutant regulatory effort.⁴ In March 2001, however, President Bush formally announced that his Administration would reject the Kyoto Protocol. In rejecting the Kyoto framework, the President called the targets set by Kyoto “unrealistic,” “arbitrary,” and “not based upon science.” He also expressed a belief that the mandates it created would have a negative economic impact on workers and consumers.⁵

In mid-June 2001, President Bush outlined what would be his Administration’s approach to climate change going forward. The President’s strategy rejected any kind of mandatory limits in favor of voluntary actions,

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³ See S. Res. 98 (July 25, 1997).
⁵ President George W. Bush, President Bush’s Speech on Global Climate Change, June 11, 2001.
increased scientific research, and market mechanisms. The President also called for the creation of a Climate Change Research Initiative (CCRI) and a National Climate Change Technology Initiative (NCCTI), in addition to a new cabinet-level Committee on Climate Change Science and Technology Integration to oversee their implementation.\(^6\)

On February 14, 2002, the President announced a “new approach” to U.S. policy on climate change, which included a plan to reduce the greenhouse gas intensity\(^7\) of the U.S. economy by 18 percent over the next 10 years.\(^8\) This goal would be met through voluntary action, by achieving efficiency improvements that would reduce the 183 metric tons of emissions per million dollars of gross domestic product (GDP) to 151 metric tons in 2012. President Bush explained that if, by 2012, the U.S. were not on track to meet its goal, it would respond with additional measures, including the possibility of a market-based program. As part of the President’s policy, he also directed the Secretary of Energy to “substantially improve the emissions reduction registry” in order to upgrade the voluntary emission reduction program already underway pursuant to Section 1605(b) of the 1992 Energy Policy Act. This voluntary reduction program, which is managed by the Department of Energy (DOE) and has been operational since 1994, records the results of voluntary measures to reduce, avoid, or sequester greenhouse gas (GHG) emissions. Finally, the approach outlined by the President included measures to increase funding in total climate-related spending and employ domestic policies such as tax incentives for renewable energy and new technology, development of fuel-efficient vehicles and cleaner fuels, and carbon sequestration.

In 2002, as part of the administration’s voluntary approach to GHG reductions, the Environmental Protection Agency (EPA) launched a “Climate Leaders” Initiative, an industry-government partnership that encourages

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\(^6\) Id.

\(^7\) GHG intensity is the ratio of GHG emissions to economic output.

partners to set a corporate-wide GHG reduction goal and inventory for emissions. This enables them to create a record of their reductions.

In February 2003, the DOE launched “Climate VISION,” as part of the Administration’s GHG-intensity reduction plan. The initiative is intended to encourage voluntary agreements by industry groups to reduce GHG emissions and improve energy efficiency by assisting efforts to accelerate the transition to practices, improved processes, and energy technologies that are cost-effective, cleaner, more efficient, and more capable of reducing, capturing, or sequestering GHGs. In addition to the DOE, participating agencies include the Department of Transportation, Department of Agriculture, and EPA.

The U.S. joined the Asia-Pacific Partnership (AP6) in 2005. In addition to the U.S., the AP6 includes China, India, Republic of Korea, Japan, and Australia. These countries have agreed to work together to achieve goals in the area of energy security, national air pollution reduction, and climate change. The countries involved represent about half of the world’s economy, population, and energy use; they also produce about 65 percent of the world’s coal. The Partnership will focus on expanding investment and trade in cleaner energy technologies, goods and services in key market sectors. It has set up several task forces in issue areas such as aluminum, buildings and appliances, cement, cleaner use of fossil energy, coal mining, power generation and transmission, renewable energy and distributed generation, and steel.

In August 2005, the President signed the Energy Policy Act of 2005, which established a voluntary program designed to accelerate demonstration and deployment of less-carbon-intensive technology to encourage voluntary reductions in GHGs.  

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9 During debate on the Energy Policy Act, the Senate also voted on a Sense of the Senate Resolution which stated that “Congress should enact a comprehensive and effective national program of mandatory market-based limits and incentives on GHGs that slow, stop and reverse the growth of such emissions at a rate and in a manner that – (1) will not significantly harm the United States economy; and (2) will encourage comparable action by other nations that are major trading partners and key contributors to global emissions.” S. A. 866 (June 22, 2005).
As for Congress, although several climate change bills were introduced in the 109th Congress, none made tremendous progress. As mentioned earlier, however, the 110th Congress has seen the introduction of several new climate change bills and increased hearings on the subject.

In January 2007, President Bush signaled the beginnings of a significant shift in the Administration’s willingness to discuss climate change legislation in his State of the Union address. Forecasting energy breakthroughs that will reduce domestic dependence on foreign oil, he stated that “these technologies will help us become better stewards of the environment, and they will help us to confront the serious challenge of global climate change.”

§ 1.02. Drivers for Change in U. S. Climate Policy.

As noted above, developments in the Congress and outside of the legislative arena are increasing pressure on the Congress, and the Administration, to develop a more comprehensive U.S. framework to address climate change. The first and most obvious driver is the fact that control of the Congress has shifted to the Democrats, who have identified climate change legislation as one of their top priorities for this session. Outside of the Congress, the pace of action is picking up on multiple playing fields. An increasing number of states are moving forward with their own aggressive initiatives to reduce GHG emissions; plaintiffs are using the courts and the legal process to try to require federal agencies to regulate GHG emissions; a growing number of companies, especially multi-national corporations, are calling for mandatory programs to increase their regulatory certainty and, in some cases, enhance market opportunities; and, finally, the most prominent 2008 Presidential candidates have all announced their support for some form of regulation of GHG emissions. These developments are summarized in more detail below.

[1] — Congress.

When the Democrats took control of both the House and Senate after the election in November 2007, they quickly announced their intent to move
climate change legislation. On the Senate side, this sense of priority was signaled by Senator Reid (D-NV), who introduced among the first 10 highly symbolic bills of the session a bill calling for, as a sense of the Senate, a mandatory program to reduce GHG emissions. On the House side, Speaker Pelosi (D-CA) quickly and visibly asked her Committee Chairmen to have a climate change bill ready for consideration on the House floor before the July 4 recess—using the pithy sound bite of “energy independence by Independence Day.” As part of this legislative effort—and in a move that signals her intent to control the direction of climate change legislation rather than defer to the more moderate Chairman of the House Energy and Commerce Committee, John Dingell (D-MI)—Speaker Pelosi also created a new Select Committee on Energy Independence and Climate Change. This new Select Committee, which is chaired by Congressman Markey (D-MA), will not have legislative authority, but will hold hearings and, in Speaker Pelosi’s words, help shape climate change legislation. At a minimum, this Select Committee is likely to highlight policy alternatives to any more business-friendly legislation that might come out of Energy & Commerce.

This sense of priority is also reflected in the pace of the hearing schedule. The 109th Congress held a total of 11 hearings on climate change in a period of two years. The 110th Congress, by contrast, held at least 10 climate change-related hearings during the first six weeks of the session, alone, and many more are scheduled or planned over the upcoming months. And it is not just the traditional committees of jurisdiction—the Senate Environment and Public Works Committee and the House Energy & Commerce Committee—that are engaging in the hearing process. Another clear reflection of the degree of Congressional interest in the issue, and the sense that climate change

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10 The Senate has expressly declined to provide any similar time frame for legislative action. Senate Environment and Public Works Committee Chairman Boxer (D-CA) has said only that she would like to move as quickly as possible and “sooner is better than later.” She also appears to recognize that it will be more difficult to move legislation through the Senate and that some compromise may be needed to get the 60 votes necessary on the Senate floor to avoid a filibuster.
has emerged as the top environmental issue of the decade, is the fact that a number of Committees on both the House and Senate sides have announced their intent to conduct oversight and, possibly, advance legislation of their own. Using the fact that several bills introduced would create or extend tax incentives for alternative and renewable energy resources as the jurisdictional hook, the House Ways and Means Committee, for example, announced that it intends to hold oversight hearings on the “impacts of climate change on the quality of life in America.” Other key committees on the House side will likely include the Oversight and Government Reform Committee chaired by Congressman Waxman (D-CA) and the Natural Resources Committee chaired by Congressman Rahall (D-WVA). On the Senate side, the Senate Energy Committee, chaired by Senator Bingaman (D-NM), will likely be a significant player in shaping any legislation. Other Committees likely to engage at some level will include the Finance Committee, chaired by Senator Baucus (D-MT), the Commerce Committee, chaired by Senator Inouye (D-HI), and the Homeland Security and Governmental Affairs Committee, chaired by Senator Lieberman (I-CT).

Members are also quickly staking out their legislative territory, introducing bills that will serve as markers and save their place at the legislative negotiating table. While none of these bills is likely to be the ultimate legislative vehicle, they begin the process of framing the issues that Congress will have to address in crafting any final bill.

As could be expected, the bills vary dramatically in terms of the approaches taken, so almost everything (except a carbon tax, so far) is on the table. At one extreme, Senator Sanders (I-VT) and Senator Boxer have introduced a bill that some have characterized as draconian. It would impose a mandatory phased-in emissions cap across industry starting with two percent reductions annually beginning in 2010. The legislation would reach an emissions cap of 26.7 percent below 1990 baseline levels in 2030; 53.3 percent below 1990 levels in 2040; and 80 percent below 1990 levels in 2050. The Sanders-Boxer bill would not require a trading program to implement the emissions cap (although, like the California legislation, such a cap-and-trade program is allowed), leaving open the potential for substantial costs and economic displacement. Senator Feinstein (D-CA)
has taken an interesting strategic approach, introducing the first of what she has indicated will be several bills to address climate change. Her first bill addresses only the utility sector and would impose gradually declining caps on electric generating facilities and create a tradable allowance system to implement the program. Her approach has some appeal insofar as it may be more manageable in scope if the goal is to enact some legislation fairly quickly (within two years), particularly given that the U.S. has substantial experience with cap-and-trade programs in the utility sector (in the areas of acid rain, NO\textsubscript{x}, and mercury regulation), and the technology is in place at most power-generating units to monitor carbon emissions.

Most of the bills introduced so far would impose an absolute reduction in the amount of emissions, whether across one industry sector such as power plants, or across the board. A draft bill that Senator Bingaman (D-NM) has floated, in contrast, would first slow and then reduce emissions growth by setting targets based on reducing GHG intensity (tons of carbon or carbon-equivalent emitted per unit of production).\textsuperscript{11} His draft legislation would phase in over the first decade a 70 percent reduction in GHG intensity, thus stabilizing emissions at 2014 levels before the trend line would actually be reversed and emissions would begin to decline in absolute terms. The Bingaman draft also takes the interesting approach of regulating carbon emissions from fossil fuels at the point of production (the mine and processing facilities), rather than at the point where the emissions occur (e.g., at the cement plant). This approach has the effect of reducing the number of regulated entities, which would make it easier to implement.

Several of the key bills of the 110th Congress are summarized below:

\textit{Feinstein (D-CA)/Carper (D-DE) (S. 317):} Regulates fossil fuel-fired, electric-generating facilities. Sets an initial cap at 2006 levels beginning in

\textsuperscript{11} On July 11, 2007, Senators Bingaman and Specter (R-PA) introduced the “Low Carbon Economy Act of 2007” (S. 1766). Unlike the draft previously distributed, the Bingaman-Specter would create a mandatory cap-and-trade system with absolute volumetric limits of GHG emissions. The bill would focus on reducing emissions from specified energy producers and large-scale coal consumers.
2011 (about a six percent reduction from anticipated levels from the electric sector). Reduces cap to 2001 emissions levels beginning 2015 (about a 16 percent reduction from anticipated levels), with one percent annual reductions in cap until 2020 (emissions would be down about 25 percent below projected levels by 2020). Beginning in 2020, sets the cap to decline 1.5 percent, annually. Makes allocations of emissions permits based on historic electricity output until 2011, thereafter an auction is phased in over time until 2036. (Auction revenues go to a special Fund to be used in developing low- and zero-emitting carbon technologies, clean coal technologies, and energy efficiency technologies). Gives credit for early action (limited to 10 percent of the 2011 allowance allocation). Does not give allocations to coal-fired generator that begins operations after January 1, 2007, unless powered by “clean coal technology” approved by EPA. Allows up to 25 percent of required reductions to be achieved with credits obtained through EPA-approved foreign government programs. Makes available offset credits from agriculture and forestry sectors, grazing, wetlands management, sequestration projects or practices that meet specific criteria in the proposal (i.e., industrial offset projects that reduce emissions from manufacturing and production processes). Gives EPA, in 2011, authority to auction 15 percent of total credits; the percent auctioned will increase by three percent per year over the next 19 years until it reaches 72 percent by 2030. Over the next six years, the percent auctioned increases by five percent per year until it reaches 100 percent in 2036. Requires that 80 percent of auction revenues be used for developing new zero- and low-carbon technologies, including clean coal, renewable energy, and energy efficiency. The remaining 20 percent will be split evenly between mitigating the effects of climate change on affected communities and low-income persons, and mitigating the effects on fish and wildlife habitat.

Sanders (I-VT)/Boxer (D-CA) (S. 309): Sets an initial GHG emissions target at 1990 levels by 2020; by 2030, emissions must be 1/3 of 80 percent below 1990 levels; by 2040, emissions must be 2/3 of 80 percent below 1990 levels; and by 2050, emissions must be 80 percent below 1990 levels. Places limits on power plants built after 2012 and, by 2030, final standards
apply to all power plants regardless of when they come online. Establishes revised CAFE standards. Authorizes a cap-and-trade scheme, but does not require one. Gives EPA authority to promulgate rules within two years of enactment that apply the most cost-effective reduction options on sources or sectors to achieve reduction goals. Makes available early action credits. Establishes energy efficiency standards requiring reductions in end-use electricity consumption. Contains a standard for low-carbon renewable fuels that mandates 5,000,000 gallons annually beginning in 2015.

*Olver* (*D-MA*) (*H.R. 620*): In 2012, sets cap at 6.15 billion metric tons of emissions minus emissions from non-covered entities (equal to about 2004 levels). In 2020, sets cap at 5.2323 billion metric tons minus emissions from non-covered entities (about 1990 levels). In 2030, sets cap at 3.858 billion metric tons, minus emissions from non-covered entities (about 33 percent below 1990 levels). In 2050, sets cap at 1.504 billion metric tons minus annual emissions from non-covered entities (about 75 percent below 1990 levels). Regulates fossil fuel producers and importers, electric power sector, large industry and commercial emitters. Distributes emissions allowances according to criteria determined by EPA. Allocates a segment of allowances to a Climate Change Credit Corporation (CCCC), which will use proceeds to reduce costs borne by consumers and for other purposes. Allows up to 15 percent of required reductions to be achieved through credits obtained through pre-certified international emissions trading programs and approved offset projects. Distributes early action credits for reductions made between 1990 and 2012. Makes available offset credits through approved domestic and international sequestration programs. Provides that money from CCCC be used to reduce consumer costs and to assist dislocated workers and affected communities, as well as to encourage deployment of new technologies, such as Integrated Gasification Combined Cycle technology.

*Mccain* (*R-AZ*)/*Lieberman* (*D-NJ*) (*S. 280*): Sets cap at 6,130 million metric tons in 2012 (equal to covered facilities’ 2004 emissions); sets cap at 5,239 million metric tons in 2020 (~ 1990 levels); sets cap at 4,100 million metric tons in 2030 (~ 22 percent below 1990 levels); sets cap at 2,096 million metric tons in 2050 (~ 60 percent below 1990 levels). Regulates the
electric power, transportation, industry and commercial sectors. Provides that, if business perceive a temporary shortage of allowances, they can borrow, for up to five years, a total of 25 percent of their obligation. Directs the Secretary of Commerce and EPA distribute allowances according to set criteria. Establishes a Climate Change Credit Corporation (CCCC) to buy and sell allowances and use proceeds to reduce costs borne by consumers. Provides that up to 30 percent of total allowance submission requirements may be achieved through credits obtained through international programs or approved reduction projects. Makes available early action credits for reductions made prior to 2012. Mandates use of 50 percent of revenue in CCCC for technology deployment. Creates separate $15 million allocation for research on carbon sequestration.

**Bingaman (D-NM) (draft bill):** Regulates fossil fuel producers and importers, as well as manufacturers of certain other GHGs. Creates an emissions “intensity” cap. Between 2012 and 2021, sets cap to decrease 2.6 percent annually from current intensity levels; beginning in 2022, cap is set to decrease three percent, annually. Contains a “safety-valve” or price cap of $7/allowance, which is set to rise five percent annually above rate of inflation. Distributes allowances in part via auction, gradually increasing from auction of 10 percent of allowances to 65 percent of allowances. Identifies specific technology policies and allocates resources from the permit auctions to fund these programs. Makes available credits for early action in the first 10 years of program. Creates a Climate Trust Fund, capped at $50 billion, to spur technology deployment. Allows use of non-domestic offset projects for compliance if Secretary of Energy authorizes it through regulation.

**Kerry (D-MA) /Snowe (R-ME):** Directs emissions reductions equal to 1990 levels from 2010-2020. Beginning in 2021, reduces emissions two and one-half percent per year until 2030 and, thereafter, three and one-half percent per year until 2050. In 2050, sets the emissions cap equal to approximately 62 percent below 1990 levels. Creates goal of preventing an increase in global mean surface temperature of two degrees Celsius (3.6 degrees Fahrenheit) above pre-industrial temperatures by stabilizing atmospheric concentration of GHGs at 450 parts per million. Creates a nationwide emissions trading
scheme, in addition to emissions standards for passenger vehicles, end-use electricity efficiency performance standards, and renewable energy portfolio standards for the electricity-generation sector. Sets increased targets for use of renewable fuels, as well as requires climate-related disclosures by corporations.

Waxman (D-CA) (H.R. 1590): Sets goal for global mean temperatures not to exceed two degrees Celsius. Sets the following emissions reduction targets: In 2010, emissions are frozen at 2009 level; between 2011 and 2020, emissions are cut by roughly two percent per year (achieving 1990 levels by 2020); between 2021 and 2050, emissions are cut by roughly five percent per year (falling to 80 percent below the 1990 emissions levels by 2050). Directs EPA to reduce GHG emissions to meet these targets. Directs EPA to create a cap-and-trade program that includes the largest sources of emissions and/or those that are most cost-effective to control. Distributes allowances via auction and, if the President chooses, according to a Presidential plan. Directs proceeds from auction to go to Climate Reinvestment Fund. Gives some allocations to non-regulated entities. Reserves Fund revenues to maximize public benefit and promote economic growth. Provides that if a regulated entity emits in excess of its allowances, the source must make up the excess emissions through reductions in the following year and pay a fine of twice the market value of such emissions. Gives EPA additional authority to issue rules to reduce GHG emissions to meet the targets. Directs EPA to issue standards limiting GHG emissions from motor vehicles, which must be at least as stringent as the current California standards. (EPA must revise the standards by 2014 and every five years thereafter to further reduce emissions, taking into account targets and technical feasibility of various standards.) Directs the DOE to establish national standards requiring that an increasing proportion of electricity be generated from renewable energy sources. (The standards apply beginning in 2009 and ramp up through 2020, when 20 percent of retail electricity sold must be generated from renewable energy sources. DOE may increase this percentage after 2020.) Also directs DOE to establish national standards requiring utilities to obtain, each year, a percentage of their electricity or natural gas supplies through energy
efficiency improvements at customer facilities. (The savings targets increase gradually from .25 percent of sales in 2010 to one percent of sales in 2012 and each following year through 2020. Each year’s required savings would be in addition to the quantity of savings required in previous years. Allows DOE to increase these percentage savings requirements after 2020.)


[a] — California.

The State of California has emerged as one of the primary drivers on climate change regulation. Its efforts to regulate stationary sources such as power plants and manufacturing facilities, as well as cars and truck, will almost certainly have the effect of pressuring the Congress (and to some degree, the Administration) to address these issues on a national scale to avoid piecemeal state-led efforts. The cornerstone of the California climate change initiative is AB 32, which was signed into law by Governor Schwarzenegger in September 2006. That legislation imposes an absolute cap on California’s GHG emissions at 1990 levels by 2020. It is the first state-wide program to cap all GHG emissions from major industries, and it requires the California Air Resources Board (CARB) to establish a program for emissions reporting, monitoring, and enforcement. The Act authorizes, but does not require, the state board to adopt market-based tools, such as a cap-and-trade system. Two days after signing AB 32, the governor also signed SB 1368, which directs the California Energy Commission to set a GHG performance standard for electricity procured by local publicly owned utilities, whether it is generated within state borders or imported from plants in other states.12

12 In addition to AB 32, California has also taken action to regulate emissions from cars and trucks. In 2002, Governor Davis signed AB 1493, directing CARB to develop GHG emissions standards for cars and light trucks. CARB developed standards that are to be phased in over the 2009 to 2016 models years. The new standards are projected to result in an 18 percent reduction in climate changes emissions from the cars and lights trucks in 2020 and a 27 percent reduction in 2030. The automobile industry is challenging those standards in court.

Seven northeastern states (New York, Vermont, New Hampshire, Maine, Connecticut, New Jersey, and Delaware) agreed as part of a Regional Greenhouse Gas Initiative to lower carbon dioxide emissions from power plants. The states agreed to cap emissions by January 1, 2009 at then current levels. The cap will continue until 2015, and thereafter the states will begin reducing emissions to achieve a 10 percent reduction by 2019. In December 2006, New York Department of Environmental Conservation released draft regulations to implement RGGI in the state. RGGI encourages states to auction up to 25 percent of its allowances to be used for the public benefit. New York’s draft regulations would allocate 100 percent of its emissions allowances through an auction, with proceeds going to promote energy efficiency and clean energy technology.

[c] — Other States/Regions.

Several other states have taken actions that will affect GHG emissions from stationary sources. A select few initiatives are discussed below.

[i] — Arizona.

In Arizona the Governor signed an Executive Order in September 2006 that establishes a statewide goal to reduce GHG emissions to 2000 levels by 2020, and 50 percent below this level by 2040. The order directs the Arizona Department of Environmental Quality to develop a GHG emissions reporting mechanism, to establish a GHG registry with other Western states, and to coordinate with the Arizona Department of Transportation to adopt and implement California’s vehicle GHG standards. On February 28, 2006, Governor Napolitano signed with New Mexico Governor Bill Richardson an agreement to create the Southwest Climate Change Initiative, under which the two States will collaborate to identify options for reducing GHG emissions and promoting climate change mitigation, energy efficient technologies and clean energy sources, and advocating for regional and national climate policies that reflect the needs and interests of Southwestern states.
[ii] — Florida.

In Florida, the legislature passed in 2006 the Florida Renewable Energy Technologies and Energy Efficiency Act, which created an Energy Commission to recommend steps and a schedule for the development of a state climate action plan to reduce GHG emissions. The Commission’s first report is due in December 2007. Before leaving office, former Governor Jeb Bush recommended in an internal “white paper” that the state begin implementing carbon constraints in the near future. Among other things, the white paper advises that the State adopt a carbon pricing program for electricity generation if the federal government has not taken substantial regulatory action in the next three to five years.

[iii] — New Mexico.

In New Mexico, Governor Richardson has recently taken several steps to build upon the Executive Order that he signed in 2005 setting GHG emission goals for the State. (The Executive Order directs a reduction of GHG emissions to 2000 levels by 2012; 10 percent below 2000 levels by 2020; and 75 percent below 2000 levels by 2050.) Following up on a series of recommendations from the State’s Climate Change Advisory Group regarding a carbon dioxide cap-and-trade system, on December 28, 2006, the Governor issued an Executive Order adopting the recommendations and creating a state government implementation team to carry them out, including the adoption of a GHG registry and reporting system. The order also directs the Department of Environment to “evaluate the effectiveness and feasibility of a mandatory market-based emission reduction program with a regional or national scope.”


[a] — Cases Based on EPA’s Authority to Regulate GHGs.

While Congress and the states move forward with their initiatives, the courts may move to fill the regulatory gap. States and environmental organizations are turning to litigation (and the rulemaking process) to try to require the U.S. EPA and, to a lesser degree, other agencies to regulate
GHG emissions under existing law. Some of the key cases are summarized below.

[i] — *Massachusetts v. EPA.*

The most significant case that changed the dynamic of the climate change debate is clearly the Supreme Court’s landmark decision in *Massachusetts v. EPA,* issued on April 2, 2007, overturning EPA’s decision not to regulate GHG emissions from new motor vehicles. The Court found that GHG emissions are “air pollutants” within the meaning of the Clean Air Act and are, therefore, potentially subject to regulation if, in the judgment of the Administrator, they “cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare.” The Court did not reach the issue of whether GHGs, in fact, endanger public health or welfare, but it did significantly constrain EPA’s discretion with respect to that determination.

Undoubtedly, the Supreme Court’s decision has changed the regulatory landscape. The determination that GHGs are air pollutants will inevitably lead to regulation of GHG emissions, and carbon dioxide (CO₂) in particular, from new motor vehicles. Also inevitably, it will lead to further litigation as proponents of regulation seek to expand the reasoning of this decision to stationary sources which, after all, also emit GHGs and the regulation of which is triggered by similar endangerment findings. In this respect, the decision is a significant one—it shifts the presumption to one in favor of regulation.

The case involved a challenge to EPA’s denial of a petition to regulate GHG emissions from new motor vehicles under section 202 of the Clean Air Act. EPA denied the petition on the grounds that it lacked the authority under the Act to regulate emissions for climate change purposes. In the alternative, it argued that even if it had the authority to set GHG standards, it would not be “effective or appropriate” to presently do so for a number of policy and practical reasons. On appeal to the Supreme Court, petitioners

13 *Massachusetts v. EPA,* 549 U.S. _____ (2007), No. 05-1120.
raised two central questions: (1) whether EPA has the statutory authority
to regulate GHG emissions from new motor vehicles under section 202 of
the Clean Air Act; and (2) if the Agency does have the authority, whether
its stated reasons for declining to regulate GHG emissions from new motor
vehicles was consistent with the statute.

Writing for the Majority in a 5-4 decision, Justice Stevens answered the
first question in the affirmative, concluding that the Clean Air Act’s language
is unambiguous and that carbon dioxide is an “air pollutant” within the
meaning of the Act and, therefore, potentially subject to regulation. The Court
went on to reject EPA’s second argument, finding that it was based on an
impermissible “laundry list” of reasons rooted in “policy judgments,” rather
than on reasons bearing on “whether greenhouse gas emissions contribute
to climate change.”14 Justice Scalia filed a dissenting opinion on the merits
on behalf of himself, Chief Justice Roberts, and Justices Thomas and Alito.
As described further below, the dissenting opinion reached the opposite
conclusion with respect to both questions.

The term “air pollutant” is defined in the statute as “any air pollution
agent or combination of such agents, including any physical, chemical, . . .
substance or matter which is emitted into or otherwise enters the ambient air.”
Focusing solely on the language following the word “including,” the Court
adopted the view that carbon dioxide is a chemical or physical substance
emitted into the air and must therefore be an air pollutant.15 The opinion
did not address whether carbon dioxide also meets the first element of the
definition, namely whether it is an “air pollution agent.” As EPA argued in
its brief, and as Justice Scalia noted in his dissenting opinion, the fact that
the statutory definition uses the words “any” and “including” does not end

14 Slip op. at 31.
15 As Justice Scalia noted in footnote 2 of his dissenting opinion, this interpretation of
the language of the definition of “air pollutant” produces an absurd result as it would then
follow that “everything airborne, from Frisbees to flatulence, qualifies as an air pollutant.”
Scalia dissent at 10.
the analysis. Justice Scalia’s dissent pointed out that “in order to be an ‘air pollutant’ under the Act’s definition, the ‘substance or matter [being] emitted into the . . . ambient air’ must also meet the first half of the definition—namely it must be an ”air pollution agent or combination of such agents.”16 The phrase following the term “including” can be illustrative of the kind of substances that might also be air pollution agents, but it does not necessarily substitute for the first element of the definition. EPA provided the following example, quoted by Justice Scalia, in support of this point: “The phrase ‘any American automobile, including any truck or minivan,’ would not naturally be construed to encompass a foreign-manufactured [truck or] minivan.”17

Having concluded that GHG emissions are “air pollutants” within the meaning of the statute, the majority of the Court had “little trouble concluding” that EPA is “authorize[ed] to regulate GHG emissions from new motor vehicles in the event that it forms a ‘judgment’ that such emissions contribute to climate change.”18 Section 202(a)(1) of the Act provides that EPA “shall by regulation prescribe . . . standards applicable to the emission of any air pollutant from any class or classes of new motor vehicles or new motor vehicle engines, which in [the Administrator’s] judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare.” To date, EPA has never made an endangerment finding with respect to carbon dioxide.

Finally, the Court rejected EPA’s alternative basis for its decision not to regulate GHG emissions from new motor vehicles. EPA had argued that even if the Clean Air Act did authorize the Agency to regulate GHG emissions from new motor vehicles, it appropriately exercised its discretion not to make an endangerment finding and regulate those emissions at this time. The Agency based its decision on, among other things, the continuing scientific uncertainties that were summarized in a 2001 National Academy of Sciences

16 Scalia dissent at 8-9.
17 Scalia dissent at 9.
18 Slip op. at 25.
Report, as well as legitimate policy considerations, including the President’s comprehensive approach to addressing climate change through investment in technology and voluntary actions. As EPA noted, “establishing [greenhouse gas] emissions standards for U.S. motor vehicles at this time would . . . result in an inefficient, piecemeal approach to addressing the climate change issue. . . . A sensible regulatory scheme would require that all significant sources and sinks of [greenhouse gas] emissions be considered in deciding how best to achieve any needed emissions reductions.”

The Court, however, concluded that EPA’s exercise of its “judgment” in this case was based upon “reasoning divorced from the statutory text” and was, therefore, invalid. Even though the statute is silent with respect to how the Agency shall exercise its “judgment” in the context of an endangerment finding, and even though the term “endanger” is not defined in the statute, the Court substantially constrained the Agency’s ability to exercise its judgment, at least with respect to a determination under section 202 of the Act. In effect, the Court held that “EPA can avoid taking further action only if it determines that GHG emissions do not contribute to climate change or if it provides some reasonable explanation as to why it cannot or will not exercise its discretion to determine whether they do.” The Court then suggested that the only basis for not exercising its discretion would be if “the scientific uncertainty is so profound that it precludes EPA from making a reasoned judgment as to whether greenhouse gases contribute to global warming.”

Significantly, the Court did not reach the question of whether EPA must actually make an endangerment finding, only that its explanation for making, or not making, such a finding must be based upon permissible statutory grounds—i.e., the relationship between GHG emissions from new motor vehicles and public health or welfare.

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20  Slip op. at 30.
21  Slip op. at 30.
22  Slip op. at 31.
In the wake of the Supreme Court’s decision, there has been both a call for EPA to take immediate action to begin regulating carbon dioxide emissions from motor vehicles and, perhaps more interestingly, intensified lobbying for Congressional action on climate change legislation. The former is hardly surprising. The Supreme Court held that carbon dioxide is an air pollutant, thereby setting the stage for EPA to initiate the regulatory process, or at least the process for deciding whether or not to make an endangerment finding. The latter, however, suggests that even advocates of regulation recognize that the victory of the decision may be a hollow one. If the goal at the end of the day is truly to reduce the atmospheric concentration of carbon dioxide and other GHGs that the Intergovernmental Panel on Climate Change (IPCC) scientists indicate are causing or contributing to global warming, and all of its anticipated effects, it is evident that regulation under the Clean Air Act will not achieve that goal.

[ii] — New York v. EPA.23

This case is, essentially, the stationary source counterpart to the mobile sources case discussed above, Massachusetts v. EPA. In New York v. EPA, the State of New York and others challenged EPA’s decision not to set new source performance standards (NSPS) for carbon dioxide from power plants under the Clean Air Act. In not setting standards, EPA relied on much of the analysis that it used in the mobile sources case. This case is now pending and could have substantial implications for all manufacturing facilities. If the court rules that EPA is required to develop standards for power plant emissions of carbon dioxide under the current Clean Air Act, we can expect to see similar arguments and lawsuits filed with respect to virtually every other significant emitter of carbon dioxide.

[b] — Common-law Nuisance Cases.

In addition to the cases seeking regulatory action, plaintiffs are increasingly filing common law nuisance cases to try to enjoin emissions or

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get monetary damages. So far, most of the cases seem extreme and unlikely to prevail, but it is always difficult to predict what an individual judge or jury will do with even a seemingly attenuated claim.


Eight states and the City of New York filed a lawsuit against the five largest emitters of carbon dioxide among electricity generators, alleging that their activities constitute a public nuisance under federal common law and seeking an injunction. Plaintiffs allege that the companies’ carbon dioxide emissions contribute to global warming that causes present and inevitable future harms to the states and their citizens. The district court dismissed the complaint as a nonjusticiable political question, finding that resolution of the issues requires “identification and balancing of economic, environmental, foreign policy, and national security interests.” Plaintiffs appealed and the Second Circuit heard arguments in June 2006.

[ii] — *Comer v. Murphy Oil U.S.A.* 25

A group of property owners filed a class action lawsuit seeking money damages in federal court against coal, chemical, and oil companies, alleging that damages sustained during Hurricane Katrina were partially a result of the companies’ contributions to global warming. They also alleged that the companies’ GHG emissions have increased the frequency of hurricanes and other storms, as well as contributed to sea level rise. The defendants have filed motions and are awaiting a decision as to whether the case will proceed to the merits or get dismissed for failure to state a justiciable claim.

[iii] — *California v. General Motors Corp.* 26

California filed suit against the major automakers seeking monetary damages in September 2006, alleging that vehicle emissions are a public

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26  California v. General Motors Corp., No. C06-05755 (N.D. Cal. 2006).
nuisance under state and federal common law because they contribute significantly to global warming, which has harmed California’s environment and economy, as well as the health and well-being of its citizens.

[c] — Broader Regulatory Challenges.

Plaintiffs are also increasingly using other existing laws to address climate change. In response to a petition from a group of environmental organizations, the U.S. Fish and Wildlife Service recently announced the proposed listing of the polar bear as a threatened species under the Endangered Species Act. This is significant because, if the listing is finalized next December, it will require all federally permitted or funded activities to analyze the impact of those activities on the polar bear and its habitat, which the Service alleges has been adversely impacted by rising temperatures and climate change. Thus, any facility that receives a Title V permit under the Clean Air Act, for example, could be required to evaluate the impact of its GHG emissions and, potentially, implement measures to reduce those emissions. No matter how unlikely it is that one GHG-emitting source has an appreciable impact on climate change, this is a legal argument that environmental groups will almost certainly make in the future. These groups have already filed lawsuits challenging major federal actions that require environmental impact statements under the National Environmental Policy Act (NEPA) for their failure to evaluate and address climate change impacts from these projects.


Pressure from the business community is also contributing to the shifting dynamic on Capitol Hill. As states move forward with piecemeal, and not

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27 In a related action, in February 2007, environmental groups filed a petition for rulemaking with EPA, DOT, and DOA, DOI, DOE, and DOD to amend federal regulations to explicitly take into account climate change. The petition seeks amendments that ensure that federal agencies consider the impact of global warming in decisions affecting listed or candidate species and their recovery.
necessarily consistent, approaches, many companies would now prefer the regulatory certainty that comes from a uniform, national program. In addition, some of those companies see business opportunities with climate change regulation (for example, manufacturers of energy efficient products or alternative fuels). Many companies that are currently or will soon be subject to mandatory reporting requirements or caps in other countries have begun the task of inventorying their emissions, and some have agreed to voluntarily reduce their emissions under private binding agreements, such as the Chicago Climate Exchange.

U.S. firms operating in other countries are already affected by regulations in places like the EU, and some U.S.-based companies may be facing regulations if they wish to conduct businesses in foreign carbon-constrained markets.

One of the more recent, high profile industry groups to call for an emissions cap is U.S. Climate Action Partnership (U.S. CAP), a conglomerate of U.S. companies and environmental groups. It announced in January 2007 that it was in favor of a nationwide mandatory cap-and-trade emissions program. Participating companies cite as one of their main concerns the fragmented regulatory approach that they currently face as the result of different approaches taken by regional, state, and local governments. The original partnership included companies such as Alcoa, BP America, Caterpillar, Duke Energy, DuPont, FPL Group, General Electric, Lehman Brothers, PEW Center on Global Climate Change, Natural Resources Defense Council, PG&E Corporation, PNM Resources, World Resources Institute, and Environmental Defense. Since it was first launched, several additional companies—including the Chrysler Group and Ford Motor Company—signed on as members.28 The group asks for serious global warming legislation as quickly as possible. Its proposal is to stabilize concentrations between 450 and 550 parts per million (ppm) through a mandatory emissions reductions plans with specific targets. It calls for a

28 A list of current partners is available at the U.S. CAP website, www.us-cap.org.
five-year target, followed by a 10-year target. By 2050, the group hopes that emissions are reduced to about 60-80 percent below current levels. The proposal seeks to cover as much of the society’s sources of GHGs as possible and recommends use of a flexible offset program.

§ 1.03. Where Is U. S. Climate Policy Headed?

While there is certainly a flurry of activity relating to climate change, the prospects for climate change legislation, at least in the near term of two years, is far from certain. Once lawmakers focus on climate change in a more thoughtful manner, as indeed they must, they will realize that the issue is complex and will require a sophisticated package of solutions. This is not to say that Congress will not act. It almost certainly will. It may find, however, that legislative action will extend over a period of a number of years and may involve a series of bills, rather than one single comprehensive package. This is particularly true if Congress is committed to passing legislation that can garner sufficient support in both the House and the more temperate Senate and get signed into law. In any event, Congress will have to consider a number of issues, and the debate that begins in this session will help shape and determine any legislation down the road.

Before there is any real movement on federal climate change policy, policymakers must decide on the objective of any such policy and how to get there. The threshold issues include the degree to which policy-makers want to achieve reductions (targets) and the timeframe to achieve those reductions (timing). The first issue necessarily entails a decision about the metric—whether to achieve reductions in absolute terms or in GHG intensity. These questions alone involve complex considerations of science and policy. After the basic questions of targets and timing are considered, lawmakers

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Consider, for example, that the Clean Air Act Amendments of 1990 took 13 years to develop and enact. One Title of that statute, the Acid Rain Trading program, took several years to develop and covered only one sector and one pollutant—the power plant industry and sulfur dioxide. A multi-pollutant greenhouse gas emissions program across multiple industries will be far more complex to develop.
must grapple with several other key issues including: (1) which policy tool to employ to achieve emissions reductions; (2) how best to encourage new low- or zero-carbon technologies; (3) how to formulate details of a chosen reduction program, such as an emissions trading scheme; and (4) how to prevent “leakage,” or translocation of businesses, and to encourage commitments by developing countries.


In deciding on the objectives for climate change policy, policymakers may be inclined to start soon, at least with short-term targets, given that some economists have projected that the cost of inaction on climate change in all likelihood exceeds the cost of action—although the expected net benefits are open to some debate.30 Some would recommend that the U.S. adopt a period of time over which it slows its growth in emissions, with a period of stabilization (preventing further growth), followed by a period of reversal of growth trends. As noted above, the initial strategy question is whether to proceed with absolute numeric reductions in emissions, as the Sanders-Boxers bill and others do, or whether to require reductions in GHG intensity, as the Bingaman draft proposes. The latter approach would provide a glide path for businesses to reduce emissions over time without jeopardizing economic growth. However, it also would result in continued overall growth in GHG emissions, at least in the short term (i.e., the next 40 or so years) as economic growth continues and new reductions technologies come on line. For that reason, the GHG intensity approach, favored by Senator Bingaman and the Administration, is opposed by environmental groups.

Some lawmakers are urging a course of action that would cap emissions to prevent a rise of atmospheric concentrations of carbon dioxide above 550 parts per million, which some scientists have advised is the upper bound of a manageable concentration (The current concentration of carbon dioxide in

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30 See testimonies of Sir Nicholas Stern, Dr. Henry Jacoby, and Dr. Gary Yohe before the U.S. Senate Committee on Energy and Natural Resources, February 13, 2007.
the atmosphere is about 380 ppm). But regardless of the target concentration, it is important to keep in mind that the IPCC Fourth Assessment concludes that climate change is irreversible to some degree. So, the critical questions become, how much is acceptable, and what can be done to achieve that level. The report also projects that if we take no action to reduce emissions, there will be twice as much warming over the next two decades than if we had stabilized GHGs at 2000 levels.

Another important issue that will have to be addressed in any legislation is how to take into consideration, and give credit for, emissions reductions already achieved by companies whether on an absolute basis or an intensity-based approach. This can be achieved in several ways, but will likely be the subject of considerable debate as a “credit for early action” mechanism, like the selection of a baseline year for measuring reductions, can have significant economic consequences for businesses that have invested great effort or resources in reducing their GHG emissions.


There are potentially three policy tools that could be used to achieve GHG emission reductions on a national scale: command-and-control regulation, a tradable emission permit system, and a tax policy. The latter two policy options are considered market-based approaches because they have the effect of placing a price on GHG emissions, and this section will focus specifically on these two tools because of the President’s and Congress’s past statements that they would favor a market-based approach to climate change policy. Unlike market-based policies, command-and-control regulations typically focus on setting technology and performance standards for pollution sources. In contrast, market-based approaches give firms flexibility in reducing their

31 The discussion that follows does not consider policy tools that are driven primarily by energy efficiency concerns, motivated largely to reduce dependence on foreign fuel supplies. Such tools, which include things like renewable energy portfolio standards or appliance efficiency standards, may have beneficial, indirect climate change effects and should not be underestimated, but a comprehensive assessment of such policies is beyond the scope of this chapter.
pollutions levels, providing financial incentives to private firms to reduce pollution levels that will generally produce more cost-effective reductions.

[a] — Cap-and-Trade Programs.

Under an emissions trading system, the government places a cap on emissions, which equals the emissions target, and then distributes emissions allowances (or permits) equal to the level of the cap. At the end of a specified period, such as one year, firms must submit to government allowances that equal their emissions levels. The key is that the companies may sell or buy allowances from other firms, giving them flexibility in determining how and where to make emissions reductions. Thus, the cap gives them an incentive to reduce emissions so that they can sell their unused allowances at a profit to other firms. The U.S. has some experience with emissions trading, in particular, under the 1990 Clean Air Act Amendments, which established a pollutant trading program to handle the problem of acid rain.

The cap-and-trade approach does not automatically place a limit on the prices of allowances, which is why some policymakers advocate a price ceiling—or “safety valve”—to be used in conjunction with a mandatory cap-and-trade system. The idea is that if the cost of allowances were to rise to the safety-valve price, the government would introduce more allowances to maintain that price. In this scenario, the actual level of emissions would exceed the overall cap of the system. The potential benefits of such an approach, however, include reduced volatility in prices, as was experienced in the initial phases of the EU ETS. There may be other ways to keep costs of a cap-and-trade program down, however, such as expanding the scope of the market and allowing firms to purchase offset credits.

Most economists recommend that a cap-and-trade approach to GHG emissions be economy-wide, as opposed to the sulfur dioxide trading program, which targets the power sector alone. Unlike the acid rain problem

which the Clean Air Act amendments were designed to address, carbon
dioxide emissions are traceable to fossil-fuel consumption throughout the
economy.

[b] — Carbon Taxes.

With an environmental tax, firms pay for each ton of pollution they emit. Firms will generally reduce their emissions until the cost of doing so is greater than the tax. Because coal has the highest carbon content of all three fossil fuels, a policy mechanism that prices carbon will have the greatest impact on coal. Compared to natural gas, coal contains roughly 75 percent more carbon per Btu. Once a tax is set, this type of policy tool has the benefit of being fairly easy to administer.

Some policy analysts have advised that, given the uncertainty associated with the costs and benefits of carbon-reduction policies, a tax on carbon dioxide emissions or a cap-and-trade program with a safety valve would result in significantly higher expected net benefits than a strict cap-and-trade program.33


Many believe that the answer to climate change will ultimately rest on the development of new technologies to deal with the problem. Unless the U.S. is willing to bear very high prices for GHG emissions in the near term, some form of enhanced R&D funding will be necessary to spur investment in technologies that could dramatically improve energy efficiency; advances in low- or zero-emission technologies (i.e., nuclear, wind, or solar power); development of sequestration technologies; and increases in alternative fuels. In fact, some economists and policy analysts agree that overall costs of a climate change policy could be minimized by a combination of gradually increasing emissions prices coupled with subsidies for R&D.34

policies tend to encourage use of existing carbon-reducing technologies as well as speed the deployment of technologies on the horizon. Federal funding of R&D can provide incentives for breakthrough technologies, which may reduce the overall price required to achieve a target reductions in emissions.

Carbon capture and storage, also called carbon sequestration, will continue to be a key to the long term solution to climate change. It is widely considered to be one of the technologies that will enable continued and robust development of the country’s coal resources. There is currently little incentive to devote the enormous capital required to make such projects viable on a large commercial scale. Part of the formula to make carbon capture and storage technology attractive from an investment standpoint will be addressing potential liability risks and regulatory constraints associated with such technologies. Another issue to be resolved is how to account for potential permanence uncertainties with such technologies.


Once a policy tool is chosen, the contours that must be drawn for an emissions reduction program are likely to be numerous and complex. For example, if the U.S. ultimately chooses to implement a cap-and-trade scheme for GHGs, it will have to answer at least two major additional questions: (1) where in the energy chain should the trading program be implemented—upstream at the point of fossil fuel production, or further downstream, such as at electric generators, industrial sources and automobiles; and (2) how should permits be allocated—given away for free or auctioned?

As to the first question, there are several possible points of regulation of fossil fuels, although some may prove more administratively difficult than others. For coal, regulation downstream at power plants is possible, and attractive by some accounts, given that many stationary sources already monitor their carbon emissions through Continuous Emissions Monitors (CEMs) employed as part of the acid rain trading program.

The second question, that of allocation, is likely to be particularly controversial because it has the capacity to create significant new
distributions in wealth. The U.S. has a history of using historical emissions data to allocate allowances (also called “grandfathering”), and the EU also takes this approach with its trading program, but this is not the only possible mechanism available. Allocation can also be accomplished through an auction or it can be done according to some output-based measure, such as pounds per megawatt hour.

Allocation schemes that rely on grandfathering of emissions permits have been criticized as a rewarding the “biggest emitters,” and they may have the effect of penalizing entities who have taken early steps to reduce their emissions and discouraging new entrants. Some grandfathering of permits may be necessary to garner enough political support any comprehensive carbon trading scheme, however. Auctions, such as the kind encouraged under RGGI, have the benefit of informing traders about current price levels and they also give all participants equal access, preventing new entrants from being disadvantaged. An auction may also generate significant revenue for the government which could be used to offset other taxes, compensate industries, workers, or consumers. Revenues from an auction could also be used to fund development and deployment of low-carbon technologies. Auctioning need not be done for all allowances in the system, but could also be accomplished for a predetermined percentage of available allowances. Some have proposed the auctioning of a small percentage of allowances at the beginning of a trading program, with a gradual increase in the percentage auctioned over the program’s evolution.

Other important questions to be answered in the development of any trading program include how to define the scope of an offset program and, if

appropriate, how do develop the system so that it could be linked to trading systems in other countries. The ability to link trading systems is considered by many economists to be a key to achieving the greatest gains at the lowest costs. Some of the policy design questions raised in this section must be, or can be, answered by Congress, while others may be left for administering agencies to flesh out.

[5] — Translocation (i.e., Leakage).

Any new U.S. climate policy should hedge against the problem of leakage; that is, the potential for a stringent go-it-alone approach by the U.S. to prompt domestic companies to relocate their businesses to countries with no or lower carbon restraints. Indeed, some have claimed that the EU’s program has had such an effect on European steelmakers, who have been shifting their production to countries without carbon dioxide emission limits.37

Aside from discouraging migration of industry, another key rationale for encouraging international commitments on climate change is that even if the U.S. took an ambitious approach to GHG abatement, such reductions alone may have little or no effect on overall global climate change trends.

§ 1.04. Conclusion.

At this point, it’s not entirely clear what the future holds for industries that are likely to be impacted by climate change regulation. Will Congress enact legislation? Almost certainly, but the question is when. It is notoriously difficult to enact legislation, and that is particularly true in the case of such a complex, highly technical, and relatively new, policy issue as climate change. While the House of Representative’s rules effectively give the Majority party control of the legislative calendar, including virtually complete control of the contents and timing of legislation (provided, of course, that the party can stick together), the Senate rules give the Minority party the ability to slow

or stop any bill lacking 60 votes. At a minimum, it is probably safe to say that comprehensive climate change legislation is not a two-year legislative effort. Having said that, however, it is also safe to conclude that this issue is not going away. And even in the absence of Congressional action, it is evident that the States, the courts, and ultimately EPA are prepared to step into the vacuum and regulate GHG emissions.