

*Climate Change Policies Affecting Your Business:
A Short Course on Worldwide Regulation*

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I. Climate Change Legislation and Policy Initiatives

In February 2007, the United Nations' Intergovernmental Panel on Climate Change (IPCC) issued a summary report that was described by its authors as a "comprehensive and rigorous picture" of the current knowledge of global warming. The IPCC report concluded that the "warming of the climate system is unequivocal" and that human activity "very likely" has been the primary cause of rising temperatures.¹ The IPCC's conclusions were widely reported in the U.S. media as an urgent call to action to address climate change. Time Magazine's February 19, 2007 edition solemnly pronounced: "Consider the case closed on global warming . . . now that the IPCC has fingered the culprits behind global warming, the question becomes, how will the world leaders respond?"

The fact is that world leaders are responding, but certainly not in a coordinated fashion. In the process, they may be solving some problems, but they are also creating some other problems by rushing forward in a well-intentioned but disjointed fashion.

At the international level, the Kyoto Protocol has now been ratified and through its binding emissions targets and market-based mechanisms, a worldwide carbon market is emerging. The U.S. federal government has not adopted a national approach to reducing GHG emissions. The new Democratic leadership in Congress however, has made climate change legislation a high priority. Some U.S. states have decided not to wait on the federal government and have begun the process of implementing emission reduction programs of their own, including developing regional emission trading programs. A complex, chaotic regulatory framework for reducing GHG emissions is emerging.

Businesses across the economy are already being affected by climate change and the policies being adopted. For some businesses, the risk is in the form of emission reduction requirements, required implementation of new technologies, and/or constraints on the use and availability of carbon-based fuels. Other businesses will be impacted indirectly through higher energy costs and increased insurance premiums.

But where some companies see risk, others will find opportunity. Climate change policies are creating new markets and demand for new products, such as those related to renewable energy production, energy efficiency, and the carbon commodity market. Increasingly companies are shifting their climate change strategies from focusing on risk management to focusing on emerging business opportunities.

However one looks at it, climate change cannot be ignored. Those who do so will be marginalized in the ongoing political debate. Many companies are already crafting corporate climate strategies that will help them to minimize risk, maximize opportunity and improve their competitive position. The purpose of this paper is to provide those companies that are new to the climate change policy arena with a short overview of the

¹ Intergovernmental Panel for Climate Change (IPCC), Climate Change 2007: The Physical Science Basis, February 2007, available at <http://www.ipcc.ch/SPM2feb07.pdf>.

legislative and policy initiatives that have been, and are in the process of, being developed at the international, national and regional level.

II. International Climate Change Policy

A. The UNFCCC

The international framework for regulating greenhouse gas (GHG) emissions began with the adoption of the United Nations Framework Convention on Climate Change (UNFCCC) in 1994.² Under the UNFCCC, governments agreed to the common objective of stabilizing GHG emissions “at a level that would prevent dangerous anthropogenic (human induced) interference with the climate system.”³ The commitments contained in the UNFCCC are nonbinding and relatively generic in nature, and include:

- Gathering and sharing information on GHG inventories, national policies and best practices for GHG reductions;
- Launching national strategies for reducing GHG emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and
- Cooperating in preparing for adaptation to the impacts of climate change.⁴

A total of 189 nations, including the United States, have now ratified the UNFCCC.⁵

B. The Kyoto Protocol

The Kyoto Protocol is a binding addendum to the UNFCCC which requires industrialized countries (referred to as Annex I countries) that ratified the treaty to collectively reduce greenhouse gas emissions by about five percent (5%) compared to their 1990 levels between 2008 and 2012.⁶ Individually, the level of required reductions varies from country to country. For example, if the United States had ratified the Protocol, it would have been required to reduce emissions by seven percent (7%) below 1990 baseline levels. By comparison, the European Union is required to reduce its emissions by eight percent (8%) collectively during the compliance period.⁷ In total, 168 countries have ratified the Protocol. Of these, 35 are Annex I countries with binding reduction requirements under the Treaty. Significantly, China, India and Brazil, large developing countries with increasing GHG emissions, have ratified the Protocol but have no required reduction targets under the Protocol.

² Source, United Nations Framework Convention on Climate Change (UNFCCC) available at: <http://unfccc.int/2860.php>.

³ UNFCCC at Art. 2.

⁴ UNFCCC at Art. 4.

⁵ See UNFCCC website, status of ratification, available at: http://unfccc.int/essential_background/convention/status_of_ratification/items/2631.php.

⁶ See UNFCCC website at: http://unfccc.int/kyoto_protocol/items/2830.php.

⁷ See Annex B to Kyoto Protocol, available at: <http://unfccc.int/resource/docs/convkp/kpeng.pdf>.

The Protocol does not mandate the use of any particular policy or strategy for meeting national emission reduction targets. Rather, countries are free to adopt a wide range of domestic policy measures. To assist countries in meeting their reduction targets, the Protocol authorizes the use of three market-based mechanisms: Joint Implementation (JI), Clean Development Mechanism (CDM), and emissions trading (IET).⁸ These mechanisms are designed to allow Annex I countries to pursue GHG emission reductions in countries where the cost may be significantly lower than at home. Taken together, these mechanisms were intended to decrease the economic and political costs of compliance with the strict emissions reduction targets and timetables.

Joint Implementation (JI) allows countries that have high emissions reduction costs to undertake, finance, or work “jointly” on emission reduction projects in other Annex I countries where reductions are more cost effective.⁹ Examples of projects include renewable energy production, energy efficiency, and reforestation. Reductions achieved through these projects are referred to as *Emission Reduction Units* (ERUs),¹⁰ and can be added to the allowable emissions limit of the country that financed or developed the project. A corresponding subtraction is made from the host country’s assigned amount to avoid double-counting.

Clean Development (CDM) functions similar to JI with the difference being that it allows Annex I countries to finance and undertake emission reduction projects in developing countries.¹¹ The theory is that this benefits the country financing the project through the acquisition of emission allowances, and also promotes sustainable development in countries that could otherwise not afford it. The credits earned for emissions reductions achieved by a project under the CDM are termed *Certified Emission Reductions* (CERs), and can be used by the developer to meet its emissions reduction target.¹²

The implementation of CDM and JI projects has grown exponentially in the last few years. According to the World Bank, trading in Kyoto CDM/JI project credits was approximately USD\$2.7 billion in 2006.¹³ This figure is five times higher than the previous year’s value.

Finally, the Protocol also allows Annex I nations to offset their emissions through certain types of land use activities that remove GHG from the atmosphere, commonly referred to as “carbon sinks”.¹⁴ Under Article 3.3 and 3.4 of the Protocol, parties can generate credits known as *removal units* (RMUs) through eligible sink activities. Land use activities eligible for RMUs under the Protocol include afforestation, reforestation, forest

⁸ See Kyoto Protocol.

⁹ Joint Implementation is permitted under Article 6 of the Kyoto Protocol.

¹⁰ Each ERU equals 1 ton of carbon dioxide equivalent (CO₂e).

¹¹ http://unfccc.int/kyoto_protocol/background/items/3145.php.

¹² *Id.*

¹³ World Bank: State and Trends of the Carbon Market (2006), available at: <http://carbonfinance.org/docs/StateoftheCarbonMarket2006.pdf>.

¹⁴ See Kyoto Protocol at Article 3.3. For more background information, see the UNFCC website at: http://unfccc.int/methods_and_science/lulucf/items/3060.php.

management, cropland management, grazing land management and revegetation.¹⁵ The amount of credits that can be claimed through land use activities is limited. As with the other Kyoto project-based mechanisms, in order to receive emission reduction credit the projects must meet development and verification guidelines.

C. The European Union (EU)

The European Union (EU) and its Member States have been the staunchest supporters of international efforts to address climate change. In order to meet its emission reduction targets under the Kyoto Protocol, the EU collectively, and its Member States individually, have implemented a host of policy measures. The cornerstone of the EU's efforts to reduce GHG emissions and meet its Kyoto targets is the European Union Emissions Trading System (EU ETS), which began operation in January 2005.

1. EU ETS

The EU ETS is, at the present time, the world's largest and most complex emissions trading system. Modeled in part on the U.S. Acid Rain Program of the Federal Clean Air Act, the EU ETS is the world's largest system in sectors covered, sources regulated, value of annual allocations, and number of political jurisdictions involved.¹⁶

The EU ETS operates as a "cap and trade" system. Under the system, each EU Member State must set an emissions limit, or "cap", for all industrial facilities in their country covered by the scheme. Sources covered by the system are then issued authorizations to emit in the form of emissions allowances. How, and to whom, the allowances are allocated is set out in a National Allocation Plan that must be approved by the EU Commission. However, the total amount of these allowances can not exceed the cap.

At the end of each year, covered facilities are required to surrender allowances equal to their actual emissions.¹⁷ They have the flexibility to buy additional allowances or to sell any surplus allowances generated from reducing their emissions. For each new compliance period the number of allowances distributed is lowered, forcing overall reductions in emissions.

The first phase of the EU ETS runs from 2005 through 2007. Installations covered during the first phase include energy activities, production and processing of ferrous metals, mineral industries and pulp and paper industries. In total, there are approximately 10,000 facilities covered across the EU, representing approximately 40% of the EU's total CO₂ emissions.

The second trading period will run from 2008 through 2012 to coincide with the Kyoto compliance period. The EU intends to expand the scope of the system significantly by:

¹⁵ *Id.*

¹⁶ Joseph Kruger and William A. Pizer, *The EU Emission Trading Directive: Opportunities and Potential Pitfalls*, April 2004, at p. 42, table 2.

¹⁷ *Id.* at: http://europa.eu.int/eur-lex/pri/en/oj/dat/2003/l_275/l_27520031025en00320046.pdf.

- Including all greenhouse gases, and not only CO₂;¹⁸
- Allowing the use of CDM and JI credits to be used for compliance purposes through the “Linking Directive”;¹⁹
- Including aviation emissions;²⁰ and
- Adding four non-EU members - Norway, Iceland, Liechtenstein, and Switzerland - to the scheme.

2. Other EU Policies to Address Climate Change

In addition to the EU ETS, the European Commission has adopted a host of other legislative initiatives aimed at reducing GHG emissions. Some of these include:

- **Promotion of renewable energy sources (Directive 2001/77/ EC)**
Under this Directive, Member States are required to promote electricity produced from non-fossil renewable energy sources (such as wind, solar, geothermal, wave, tidal, hydroelectric, biomass, landfill gas, sewage treatment gas, and biogas energies) with a target of 21% in the share of EU gross electricity consumption to be reached by 2010. Individual Member States are given discretion as to the legislative measures adopted to accomplish the Directive’s goal.
- **Promotion of biofuels for transport (Directive 2003/30/ EC)**
Member States are required to promote bio-fuels (liquid or gaseous fuels used for transport and produced from biomass) with a target of 5.75% in the share of fuels sold to be reached by 2010. Implementation of Member State legislation to accomplish this Directive’s target was due by December 2004.
- **Energy performance of buildings (Directive 2002/91/ EC)**
This Directive requires EU governments to set common minimum performance standards for energy efficiency in buildings. Standards apply to all new constructions and large old buildings undergoing major refurbishment from January 2006. Sellers and landlords will have to provide prospective buyers and tenants with energy performance certificates. Implementation of this Directive by Member States was required by January 2006.
- **Reductions of methane emissions from landfills (Directive 1999/31/EC)**

¹⁸ See EU Emissions Trading Scheme at: <http://www.euractiv.com/en/sustainability/eu-emissions-trading-scheme/article-133629>.

¹⁹ *Id.*

²⁰ See *EU wants airline emissions cap from 2011* at: <http://www.euractiv.com/en/transport/eu-wants-cap-airline-emissions-2011/article-159741>.

Under the Landfill Directive, Member States are required to gradually reduce the amount of biodegradable waste that they landfill to 35% of the 1995 level by 2016.

- **Minimum taxation of mineral oils, coal, natural gas and electricity (Directive 2003/96/EC)**

The EU system of minimum taxation rates for energy products was for a long time confined to mineral oils. This Directive extends minimum taxation rates to coal, natural gas - used as motor and heating fuels - and to electricity. It encourages more efficient use of energy, and it authorizes Member States to grant tax advantages to businesses that take specific measures to reduce their emissions.

3. Results of EU Policies to Date

Despite the adoption of these policies, the evidence to date suggests that most EU Member States are not on track to meet their Kyoto reduction targets. In October 2006, the European Environment Agency (EEA) warned that, with existing measures, only Sweden and UK would reach their reduction targets.²¹ Collectively, the EU-15 is on track to reach only a 0.6% reduction by 2010. The EEA report attributed the difficulties in reaching the target to the significant increases in emissions from the transportation sector. The report noted that GHG emissions decreased in most sectors; however, emissions from the transportation sector increased by nearly 26%, and are projected to increase to 35% above 1990 levels by 2010.²² The EEA suggests that additional policies and measures, particularly in the transportation sector, will be needed to reach the eight percent (8%) reduction goal by 2012.

4. EU Strategies Beyond 2012

With the first commitment period of the Kyoto Protocol closing in 2012, the EU has begun discussions both internally and in the international community on its future long-term strategies to address climate change. In a paper titled, "Winning the Battle Against Climate Change," the EU laid out its future strategy which focuses on the following "core elements":

- Persuading all major world emitters to commit to a binding scheme to reduce emissions, including the United States and rapidly emerging economies such as China and India;
- Including more sectors in emissions reductions, including transportation, aviation, and maritime;
- Tackling the problem of deforestation which increases global warming;
- Promoting climate-friendly technologies;
- Increased use of market-based instruments such as the EU ETS; and

²¹ See *EU must take immediate action on Kyoto targets*, available at: <http://www.eea.europa.eu/pressroom/newsreleases/ghgtrends2006-en>.

²² *Id.*

- Adaptation policies in Europe and globally to deal with the inescapable impacts of climate change.

III. U.S. Federal Climate Change Policy

The United States government has not adopted a mandatory regulatory regime for reducing GHG emissions. The Bush Administration has opposed any form of mandatory regulation of GHG emissions and has instead focused on promoting voluntary emission reductions and investing in climate-related science and technology research. The goal of the Bush Administration's climate change policy is to reduce the GHG intensity of the American economy by 18% from "business as usual" by 2012.²³ Through voluntary reduction programs, the Administration estimates that it will reduce cumulative emissions of GHG emissions by more than 1,833 million metric tons by 2012.²⁴ The Administration further estimates that it has committed over \$29 billion to climate-related science, technology, international assistance, and incentive programs since 2002.²⁵ A complete list of the federal government's climate related policies can be found at: <http://www.state.gov/g/oes/rls/or/2006/75337.htm#IIC>.

A. Calls for Mandatory Federal Regulation

There is growing consensus among the general public, the business community, and the political leadership in the United States that the federal government should take a more prominent role in addressing climate change than it has to date under the Bush Administration.

On the public side, a recent poll conducted by the International Herald Tribune, a leading British news publication, found that 75% of Americans believe that their government is not doing enough to address global warming. In a poll conducted by the Massachusetts Institute of Technology in October 2006, Americans ranked climate change as the country's most pressing environmental problem. This represents a dramatic shift from three years ago, when they ranked climate change sixth out of 10 environmental concerns. Almost three-quarters of the respondents felt the government should do more to deal with global warming, and individuals were willing to spend their own money to help.

Leading U.S. corporations have also come out in favor of more active federal involvement in addressing climate change. In January 2007, a group called the U.S.

²³ See *USA Energy Needs, Clean Development and Climate Change Partnerships in Action*, U.S. Department of State, available at: <http://www.state.gov/g/oes/rls/or/2006/75337.htm#A>.

²⁴ See *USA Energy Needs, Clean Development and Climate Change Partnerships in Action*, U.S. Department of State, available at: <http://www.state.gov/g/oes/rls/or/2006/75337.htm#A>.

²⁵ See Fact Sheet: *Bush Administration Plays Leading Role in Studying and Addressing Global Climate Change*, U.S. Department of State website, available at: <http://www.state.gov/g/oes/rls/fs/2007/79836.htm>.

²⁶ See *Poll finds strong support in Europe and U.S. for polluter taxes*, International Herald Tribune, February 23, 2007 available at: <http://www.iht.com/articles/2007/02/22/news/poll.php>.

²⁷ See *MIT survey: Climate change tops Americans' environmental concerns*, available at: <http://web.mit.edu/newsoffice/2006/survey.html>.

Climate Action Partnership, which consists of companies such as Alcoa, BP, Duke Energy, DuPont, General Electric, and PG&E, called on the federal government “to quickly enact strong national legislation to require significant reductions of greenhouse gas emissions.”²⁸ The group issued a series of policy framework recommendations that it hopes will guide Congress as it contemplates mandatory GHG regulation. Jeff Immelt, Chairman and CEO of General Electric, was quoted as saying that the “recommendations should catalyze legislative action that encourages innovation and fosters economic growth while enhancing energy security and balance of trade, ensuring U.S. leadership on an issue of significance to our country and the world.”²⁹

Even more recently, an international business group, the Global Roundtable on Climate Change, which includes more than 80 large U.S. and international companies, including Air France, Alcoa, and Swiss Re, came out in support of mandatory global targets to reduce greenhouse gas emissions and address climate change.³⁰ In February 2007, the group issued a press statement entitled “The Path to Climate Sustainability,” wherein it stated that:

Clear and efficient mechanisms are needed to place an appropriate market price on carbon emissions at the national and international level. . . . Establishing such a market price (via tradable emission credits, permits, incentives, taxes, and/or other measures) is needed to reward efficiency and emission avoidance, encourage innovation, help induce energy producers and consumers to choose low- and zero-carbon emission technologies, create a level playing field across technology options, and, thereby, reduce the overall, system-wide cost of decarbonization. The most successful policies will give a clear price signal for many years into the future.³¹

On the political front, the new Democratic leadership in Congress has pledged to make climate change a high priority, and the new Speaker of the House, Nancy Pelosi, has indicated that she intends to have a floor vote on a comprehensive climate and energy bill by July 2007.³² A number of climate change measures have been offered by members of both the Democratic and Republican parties, increasing the likelihood of passing some type of federal climate change legislation in the near future.

²⁸ The complete recommendations of the U.S. Climate Action Partnership can be viewed at: <http://www.us-cap.org/ClimateReport.pdf>.

²⁹ See U.S. Climate Action Partnership press release, available at: <http://www.us-cap.org/media/release.pdf>.

³⁰ See *Business calls for carbon targets*, BBC, February 20, 2007, available at: <http://news.bbc.co.uk/2/hi/science/nature/6380463.stm>.

³¹ See *The Path to Climate Sustainability*, Global Roundtable on Climate Change, February 20, 2007, available at: http://www.earth.columbia.edu/grocc/documents/GROCC_statement_2-19.pdf.

³² See Key House Dems question Pelosi’s summer deadline, E&E News, February 14, 2007, available at: http://www.eenews.net/EEDaily/sr_climate_change/2007/02/14/1/ (subscription required).

At least six major climate change bills have been introduced in Congress in just the first two months of this year. These bills are summarized below.

B. Climate Change Bills Currently Pending in Congress

1. Climate Stewardship and Innovation Act – S. 280³³

Summary: The bill would create a cap and trade program that covers approximately 85% of U.S. GHG emissions. Regulated facilities would include those that emit more than 10 million tons of GHGs per year (e.g., power plants, large manufacturing facilities, and transportation fuels at the refinery). Emissions would be capped at 2004 levels beginning in 2012. Thereafter, emissions would be reduced 14% below 2004 levels by 2020; 33% below 2004 levels by 2030; and 67% below 2004 levels by 2050. Under the proposed system, emission allowances would be distributed by a newly established Climate Credit Corporation. Proceeds from auction of allowances would be used to help consumers with high energy prices, investment in low carbon technologies, and climate-related habitat restoration. The bill would allow companies to generate offset credits from agricultural activities, reforestation efforts, and CDM-like projects in developing countries. There is a 30% limit on use of offsets.

In addition to the proposed trading system, the bill also contains programs to spur development of renewable energy, research into sequestration opportunities, develop energy efficiency standards for buildings, and research adaptation to climate change.

Sponsors: Senators McCain and Lieberman are the prime sponsors of the bill.

2. Global Warming Pollution Reduction Act – S. 309³⁴

Summary: This bill would amend the Federal Clean Air Act by adding a new title that focuses exclusively on addressing climate change. Included in the bill are programs that establish strict emission limits for power plants, establish a national renewable portfolio standard, impose new GHG emissions standards on all automobiles that are at least as strict as California's proposed standards, mandate an increase in the use of biofuels, and establish energy efficiency targets for products and buildings. Also included are provisions to promote sequestration, require U.S. participation in future international climate negotiations, require consideration of GHG emissions as part of NEPA, and mandate that the Securities and Exchange Commission establish rules on disclosure of climate change risk. Significantly, the bill does not mandate the use of a cap-and-trade system, but rather grants EPA discretion to create a trading system.

The bill establishes an economy-wide emission reduction target of 2% each year between 2010 and 2020. Thereafter, the bill sets a reduction target of 27% below 1990 emission levels by 2030; 53% below 1990 levels by 2040; and 80% below 1990 levels by 2050.

³³ The full text of S. 280 can be found at: <http://thomas.loc.gov/cgi-bin/bdquery/z?d110:s280>.

³⁴ The full text of S. 309 can be found at: <http://thomas.loc.gov/cgi-bin/query/z?c110:S.309>.

Sponsors: Senators Sanders and Boxer are the prime sponsors of the bill.

3. Electric Utility Cap-and-Trade Act – S.317³⁵

Summary: The bill sets up a cap-and-trade program that covers only electric utilities. The bill would require nationwide reduction in power plant GHG emissions to 2006 levels by 2011. By 2015 emissions must reach 2001 levels. Thereafter, emissions would be reduced 1% per year from 2016 to 2109. After 2020, yearly reductions would be increased to 1.5%.

Under the proposed trading scheme, 85% of credits (allowances) would be allocated based on historical output. The remaining 15% would be auctioned with proceeds to go to research and development of low- and zero-carbon energy technologies, and to habitat protection. The bill contemplates the extensive use of offsets, including farming, wetland and reforestation credits. Credits can also be earned from CDM-like projects in developing countries.

The bill also contains provisions promoting research programs, new emission measurement technologies, and sequestration.

Sponsors: Senators Feinstein and Carper are the prime sponsors of the bill.

4. Bingaman Bill³⁶ – No Bill Number Yet

Summary: Unlike the other proposed bills that seek absolute reductions in GHG emissions, this bill focuses on cutting emissions intensity relative to economic growth. The bill would establish annual emissions caps based on targeted reductions in greenhouse gas intensity, defined as emissions per dollar of Gross Domestic Product. The intensity reduction would be 2.6 percent per year beginning in 2012 through 2021, and increase to three percent (3%) per year beginning in 2022. The cap would apply to “upstream” fuel producers and other entities including manufacturers, importers and emitters of non-fuel GHGs, and would provide for trading of emissions allowances between covered sources.

In the first years of the program, 55% of the allowances would be given away to industry for free and the remaining 45% would be devoted to public purposes, for energy efficiency or other policy goals. The amount of allowances given away for free is eventually phased out. In 2012, 10% of the allowances would be auctioned, and by 2044 the number would increase to 65%.

The trading program would allow for the use of both domestic and international offsets, including sequestration, landfill methane, animal waste projects, and other reductions

³⁵ The full text of S. 317 can be found at: <http://thomas.loc.gov/cgi-bin/query/z?c110:S.317>.

³⁶ The full text of the Bingaman bill is available at: http://www.eenews.net/features/documents/2007/01/05/document_gw_01.pdf.

made by non-regulated facilities. As an economic safety valve measure, the bill would allow regulated industries to purchase “extra” allowances at a fixed price

Sponsors: Senator Jeff Bingaman is the prime sponsor of the bill.

5. Kerry-Snowe Bill – S. 485³⁷

Summary: The goal of this bill is stabilize atmospheric greenhouse gas concentrations at 450 parts per million. The bill would establish an economy-wide GHG cap-and-trade program. The decision on which industries would be regulated is left to the EPA Administrator. The reduction targets in the bill include a return to 1990 emission levels by 2020. From 2021 and 2030, emissions must be cut 2.5 percent per year. Between 2031 and 2050, emissions must be reduced another 3.5 percent per year.

Other provisions of the bill include automobile emissions standards, establishment of a national renewable portfolio standard (RPS), and an increase in use of biofuels. The allocation of allowances under the trading program is left to the discretion of the President.

Sponsors: Senators Kerry and Snowe are the prime sponsors of the bill.

6. Climate Stewardship Act – HR. 620³⁸

Summary: This is the House version of the *Climate Stewardship and Innovation Act – S. 280* (McCain-Lieberman bill). The primary difference is that this bill sets more aggressive long-term emission cuts.

Sponsors: Rep. John Olver (D-Mass.) and Rep. Wayne Gilchrest (R-Md.) are the prime sponsors of the bill.

At this stage it is too early to know whether Congress will be able to coalesce around a single climate change bill this year. Disagreements between lawmakers from coal-producing states, and those who represent districts on the east and west coasts, will make the task of reaching a compromise extremely difficult. At the very least, one can expect lawmakers to proceed with caution given the complexity of the issues, and the economic and environmental stakes involved. Even if lawmakers can reach a compromise, it is unclear whether the President would sign any measure that mandates emission reductions. As recently as February 20, 2007, the Administration reiterated its position that it believes that the U.S. can cut emissions more effectively without mandatory caps.³⁹

IV. State and Regional Responses

³⁷ The full text of S.485 is available at: <http://thomas.loc.gov/cgi-bin/query/z?c110:S.485>.

³⁸ The full text of H.R. 620 can be found at: <http://thomas.loc.gov/cgi-bin/bdquery/z?d110:HR00620>.

³⁹ See *White House says U.S. can cut emissions more effectively without mandatory caps* E&E News, available at: http://www.eenews.net/Greenwire/sr_climate_change/2007/02/08/11/ (subscription required).

In the absence of a comprehensive federal climate change policy, state and local governments across the country are adopting measures aimed at reducing greenhouse gas emissions. Examples of the types of policies and strategies being implemented include: emissions reporting requirements, development and implementation of statewide emission reduction targets, clean energy promotion, automobile performance standards, and energy efficiency. In addition to individual state actions, a number of states have begun acting on a regional basis to address climate change. What follows is a survey of some of the more significant state, regional and sector specific actions that have been taken or that are being considered by states, with a particular emphasis on the actions taken by western states.

A. California and AB 32

In August 2006, California became the first state in the nation to adopt an economy-wide cap on carbon dioxide emissions (CO₂). The Global Warming Solutions Act of 2006, also known as AB 32, requires California reduce its statewide greenhouse gas emissions to 1990 levels by 2020.⁴⁰ The reductions are to be accomplished through the use of a statewide emissions cap that will gradually be phased in beginning in 2008. AB 32 does not mandate specific measures to reduce greenhouse gas emissions. Rather, the law directs the California Air Resources Board (CARB) to develop regulations to achieve the required emissions reductions. The new law specifically contemplates that CARB may adopt regulations that establish market-based approaches such as emissions trading to achieve the required reductions.⁴¹ In developing the implementing regulations, CARB is required to consult with other states, the federal government, and other nations in order to “facilitate, the development of integrated, and cost-effective regional, national, and international greenhouse gas reduction programs.”⁴² The implementing regulations must be in place by January 1, 2011.⁴³

Prior to developing implementing regulations, CARB must identify all significant sources of greenhouse gas emissions in the state and adopt regulations establishing mandatory monitoring and reporting system for these sources. The regulations creating this mandatory emissions registry must be in place by January 1, 2008.⁴⁴

The new law anticipates the potential for court action that may affect what CARB can do to reduce CO₂ emissions. California is currently facing a lawsuit over its clean car standards, which require carmakers to reduce global warming emissions from new passenger cars and light trucks beginning in 2009.⁴⁵ If the state wins the lawsuit, automakers will almost certainly seek relief from the federal government in order to avoid having to comply with California’s emissions standards. If the state loses the

⁴⁰ See AB32 at Part 3. A copy of AB 32 is available at: http://www.leginfo.ca.gov/pub/05-06/bill/asm/ab_0001-0050/ab_32_bill_20060927_chaptered.pdf.

⁴¹ AB 32 at Part 5.

⁴² AB 32 at Part 4.

⁴³ AB 32 at Part 4.

⁴⁴ AB 32 at Part 2.

⁴⁵ See *Central Valley Chrysler Jeep, Inc., et al v. Witherspoon*, CIV-F-04-6663-REC-LJO, U.S. District Court for the Central District of California.

lawsuit and California is prevented from regulating CO₂ emissions from automobiles, AB 32 requires that CARB “implement alternative regulations to control mobile sources of greenhouse gas emissions to achieve equivalent or greater reductions.”⁴⁶

B. Washington

1. Executive Order 07-02

In February 2007, Washington State Governor Christine Gregoire signed an Executive Order that outlines her administration’s goals for addressing climate change. The Executive Order (EO) establishes a series of measurable targets and goals that are intended, according to the EO, to reduce Washington’s contribution to global climate pollution, grow Washington’s clean energy economy, and move Washington towards energy independence.⁴⁷

The five goals set forth in the EO are:

- By 2020, reduce expenditures by 20% on fuels imported into the state by developing Washington resources and supporting efficient energy use.
- By 2020, increase the number of clean energy sector jobs to 25,000 from 8,400 in 2004.
- By 2020, reduce greenhouse gas emissions to 1990 levels, a 10 million metric ton reduction from 2004 levels.
- By 2035, reduce greenhouse gas emissions to levels 25% below 1990 levels, a 30 million metric ton reduction from 2004 levels.
- By 2050, the State of Washington will do its part to reach global climate change stabilization levels by reducing greenhouse gas emissions to levels 50% below 1990 levels or 70% below expected output levels, a 50 million metric ton reduction.⁴⁸

The EO does not provide any detail as to what measures the state would employ to meet the goals. Rather, it calls for the creation of a stakeholder group, dubbed the “Washington Climate Change Challenge,” that will focus on identifying strategies to meet the Governor’s goals. The stakeholder group is to be directed by the State Departments of Ecology and Community, Trade, and Economic Development (CTED). The directors of these agencies are to appoint members to the stakeholder group from the business, environmental and governmental communities. The stakeholder group will be expected to report back to Governor Gregoire within a year with specific recommendations for achieving the goals. The stakeholder group is expected to begin working in early March.

⁴⁶ AB 32 at Part 7.

⁴⁷ See Executive Order 07-02, *Washington Climate Change Challenge*, available at: http://www.governor.wa.gov/execorders/eo_07-02.pdf.

⁴⁸ *Id.*

2. Additional Actions Taken By Washington

Additional actions that the State of Washington has taken to address climate change include:

- Adopting California’s Clean Car standards which require cars, light trucks, and medium-duty passenger vehicles (SUVs and passenger vans) to meet tougher GHG emissions standards. Under the new law, automakers are required to begin reducing greenhouse gas tailpipe emissions by 2009 and by 2016 must achieve a 30% reduction in greenhouse gas emissions in all new vehicles sold in the state.⁴⁹ In Washington, more than 50 percent of greenhouse gas emissions are from automobiles. Other states that have adopted the California standard include Arizona, Connecticut, Maine, Massachusetts, New Jersey, New York, Oregon, Pennsylvania, Rhode Island and Vermont. Maryland and Texas are considering legislation.⁵⁰
- Requiring new or expanded fossil fuel power plants to mitigate 20 percent of CO₂ emissions.⁵¹
- Passage of renewable portfolio standard (RPS) legislation.⁵² In November 2006, Washington voters adopted by initiative a law that requires large public and private utilities to gradually increase the amount of renewable energy in their supply of electricity provided to consumers. The new law sets a series of yearly targets that dictate the percentage of the utilities’ electricity mix (often referred to as “load”) that must come from renewable sources. The first target is set for January 1, 2012 and requires that utilities acquire 3% of their load from renewable resources.⁵³ By 2020, qualifying utilities must obtain 15% of their load from renewable energy sources.⁵⁴ At least 22 other states have passed similar RPS legislation.⁵⁵

3. Climate Change Bills Pending in the Washington Legislature

Washington’s legislature is considering several different climate change bills. As of press time, these included the following:

- **HB 1210**
This bill which would impose an economy-wide GHG emissions cap on the state, similar to the one adopted by California’s under its Global Warming

⁴⁹ See Focus on Clean Car Standards, Washington State Department of Ecology, available at: <http://www.ecy.wa.gov/pubs/0502010.pdf>.

⁵⁰ See “State Legislation Around the Country, Pew Center on Global Climate Change, available at: http://www.pewclimate.org/what_s_being_done/in_the_states/state_legislation.cfm.

⁵¹ See Chapter 80.70 RCW.

⁵² Codified at Chapter 19.285 RCW.

⁵³ *Id.*

⁵⁴ *Id.*

⁵⁵ See *States with Renewable Portfolio Standards*, Pew Center on Global Climate Change, available at: http://www.pewclimate.org/what_s_being_done/in_the_states/rps.cfm.

Solutions Act of 2006. It would require reduction in statewide greenhouse gas emissions to 1990 levels by the year 2020.⁵⁶ It is considered unlikely to pass.

- **SB -6001**

This bill would establish state goals to reduce greenhouse gases emissions. The goals are the same as those set out in the Governor's Executive Order. The bill does not state how the goals would be accomplished. It would require the Department of Ecology to establish a greenhouse gases emissions performance standard for electric utilities operating in the state. The bill authorizes the Department of General Administration to purchase 100 plug-in hybrid vehicles when commercially available. It also authorizes municipal electric utilities and public utility districts to mitigate greenhouse gases emissions from their electricity operations and purchases, and create a public utility tax credit for consumer-owned utilities that invest in energy efficiency measures. Finally, it would create the Office of Washington State Climatologist.⁵⁷ It is considered the leading climate change bill in the legislature this year.

- **HB 1740**

This bill requires certain state agencies to report their greenhouse gas emissions.⁵⁸

- **HB 1893**

This bill establishes a greenhouse gases emissions performance standard for electric utilities.

- **SB 5359**

This bill would create a panel to study various greenhouse gas emission reporting and registry programs and report back to the legislature on its findings.⁵⁹

C. Regional Climate Change Initiatives

1. Northeast States: The Regional Greenhouse Gas Initiative

The Regional Greenhouse Gas Initiative, or RGGI, is a cooperative effort by seven Northeastern and Mid-Atlantic states to reduce carbon dioxide emissions from power plants through the use of a regional cap and trade system. In August 2006, a Model Rule for implementing the RGGI system was finalized. The Model Rule sets forth the specific details for how the system will operate. Each participating state is required to adopt the Model Rule in order for RGGI to become effective.⁶⁰

⁵⁶ See HB 1210, available at: <http://apps.leg.wa.gov/billinfo/summary.aspx?bill=1210&year=2007>.

⁵⁷ See SB 6001, available at: <http://apps.leg.wa.gov/billinfo/summary.aspx?bill=6001&year=2007>.

⁵⁸ See HB 1740, available at: <http://apps.leg.wa.gov/billinfo/summary.aspx?bill=1740&year=2007>.

⁵⁹ See SB 5359, available at: <http://apps.leg.wa.gov/billinfo/summary.aspx?bill=5359&year=2007>.

⁶⁰ See Summary of Model Rule, available at: http://www.rggi.org/docs/model_rule_release_8_15_06.pdf.

The Model Rule sets a regional “cap” or emissions budget for CO₂ emissions from fossil fuel fired power plants greater than 25 MW. Beginning in 2009, the regional emissions budget will be approximately 121 million tons, which is roughly equivalent to the current emissions level.⁶¹ This cap would remain in place until 2015. Thereafter, states would be required to achieve a 10% reduction in emissions by 2019.⁶²

The regional emissions budget is divided among the participating states in the form of emission allowances.⁶³ Each state is permitted to allocate its emissions budget among regulated sources as it sees fit.⁶⁴ States have the discretion to decide whether they are going to auction the allowances or give them away for free, with the only caveat being that 25% of the allowances must be set aside for “consumer benefit or strategic energy.”⁶⁵ The decision to set aside allowances for new sources is left to the discretion of each state. At the end of each compliance period, each regulated facility must surrender enough allowances to cover its reported emissions. Facilities can buy or sell allowances, but they must have enough to cover their own emissions.⁶⁶

The program allows facilities to utilize “offsets” to cover 3.3 percent of their overall emissions.⁶⁷ Offsets are a form of credit that is generated through greenhouse gas emissions reductions projects. The model rule contemplates the issuance of offset credits for landfill gas projects (e.g., methane capture), sulfur hexafluoride emission reductions, sequestration of carbon by afforestation, end use energy efficiency projects that reduce or avoid CO₂ from natural gas, oil or propane use, and avoided emissions from agricultural manure management operations.⁶⁸ Because the system will accept offsets from anywhere in the U.S., it may lead to business opportunities that extend far beyond the Northeast. Additional types of offsets may be added over time, including possibly the use of allowances issued under the European Union emission trading system, and CDM issued under the Kyoto Protocol.

2. Western States: The Western Regional Climate Action Initiative

In February 2007, the Governors of Washington, Oregon, California, Arizona, and New Mexico announced that they intend to work cooperatively to develop a joint regional strategy for reducing greenhouse gas (GHG) emissions that would include the creation of a regional emissions trading system.⁶⁹ The announcement marks the second state-led effort to create a regional greenhouse trading program within the U.S., and will likely put

⁶¹ *Id.*

⁶² *Id.*

⁶³ One allowance equals one ton of CO₂.

⁶⁴ *Id.*

⁶⁵ *Id.*

⁶⁶ *Id.*

⁶⁷ *Id.*

⁶⁸ *Id.*

⁶⁹ See Western Regional Climate Action Initiative, available at: http://www.governor.wa.gov/news/2007-02-26_WesternClimateAgreementRelease.pdf.

even more pressure on the federal government to create a national strategy to address climate change.⁷⁰

The agreement signed by the five Governors – referred to as the Western Regional Climate Action Initiative – requires the states to set a regional GHG emissions reduction goal within six months.⁷¹ The regional reduction goal, according to the agreement, should be consistent with reduction goals that individual states have previously established. Within a year after setting the regional GHG reduction goal, the states are to develop a market-based strategy, “such as a load based cap-and-trade program,” to assist in achieving the required reductions.⁷² To facilitate the creation and operation of the trading program, the states also commit under the agreement to participate in a multi-state GHG emissions registry. The emissions registry is intended to assist in the “tracking, managing, and crediting” of emission reductions.⁷³

The agreement did not contain any details as to what sectors of the economy would be covered by the regional emissions trading system. However, Sarah Cotrell, a spokesperson for New Mexico Governor Bill Richardson, stated that the system would likely cover multiple sectors of the regional economy.⁷⁴ She also indicated that the system may be developed so that it could link up with other emissions trading systems, such as the REGGI system being developed by the northeast states.⁷⁵

⁷⁰ A group of ten northeast and mid-Atlantic have designed and are in the final stages of implementing a regional GHG trading program to control carbon dioxide emissions from power plants. For more information about the Regional Greenhouse Gas Initiative, go to: <http://www.rggi.org/>.

⁷¹ *Id.*

⁷² *Id.*

⁷³ *Id.*

⁷⁴ See Five Western States to Launch Greenhouse Gas Trading Program, E&E Publishing, February 27, 2007 (subscription required).

⁷⁵ *Id.*