



United States Climate Change and Energy Policy: An Overview and Analysis

David Campbell

FACET Analysis No. 2 – January 2009

OVERVIEW

On November 4 of last year, voters in the United States of America elected, for the first time in U.S. history, a candidate with African-American roots. Former U.S. Senator Barack Obama (D-IL) received 53 percent of the popular vote and 365 electoral votes. On January 20, in front of ca 1.8 million cheering supporters, Obama was sworn in as the nation's 44th President.

Politically, with large Democratic gains in Congress, and a Democrat in the White House, the United States has turned a few shades bluer. Democrats increased their majority in the House of Representatives to 79 seats, and will control at least 58 seats in the Senate, with the Minnesota contest still undecided. There is a great sense of optimism, excitement and hope surrounding President Obama. The key question, for purposes of this FACET Analysis, is not how "blue" the new administration and Congress will be, but rather, how green.

As recently as August, climate and energy ranked at the top of the U.S. policy agenda. Legislators, the Bush Administration, the presidential campaigns and American consumers were struggling to find answers to climate change, soaring energy and food commodity prices, and dependence on oil imports. Since then, an even greater concern has emerged: the health of global capital markets. Slumping housing values, imploding retirement accounts and failing financial institutions have supplanted concerns over melting ice caps, accelerating desertification and energy security.

This FACET Analysis examines the state of U.S. climate change and energy policy at the federal and sub-national levels, capturing the key developments in 2008, and looking ahead to 2009. It refers to the role of the U.S. courts, and the activities of American industry. It argues that the United States is entering a period of opportunity and considerable challenges, in which growing political and popular support for action against climate change will confront economic difficulties that may shrink political and corporate agendas.

INTRODUCTION

The United States is entering a period of great opportunity and considerable challenges. There is growing political and popular will to take action on climate change and other environmental issues. But there are also numerous economic difficulties that will compete for limited resources and shrink political and corporate agendas. Despite strengthened Democratic majorities in Congress and a Democratic President, U.S. climate change, energy and energy efficiency policy will be influenced by economic developments at home and abroad.

The outgoing administration did more to address climate change than is generally recognized, especially overseas. President George Bush authorized millions of dollars to fund research into “clean technologies” and renewable energies, and directed U.S. agencies to participate in international environmental initiatives. The same holds for energy and energy efficiency. While in office Pres. Bush signed two significant pieces of energy legislation: the Energy Policy Act of 2005 (EPAAct) and the Energy Independence and Security Act of 2007 (EISA). Still, there is no federal U.S. legislation to address greenhouse gas (GHG) emissions, the United States is not party to the Kyoto Protocol, and not much has been accomplished to address U.S. dependence on oil imports.

At the start of the 110th Congress in 2007, Democrats vowed to prioritize climate change and the environment. Speaker of the House of Representatives Nancy Pelosi (D-CA) promised a July 4, 2007 floor vote on comprehensive climate change legislation. While that vote did not take place, there was some movement late last year. In September, Congress permitted the Congressional ban on offshore drilling to expire. In October, Congress re-authorized tax credits for clean technology and renewable energy as part of the \$700 billion financial rescue package. Still, apart from EISA, the 110th Congressional record on the environment was notably thin.

In contrast, the U.S. sub-national level is teeming with activity. Frustrated by the gridlock in Washington, U.S. states, cities and communities are taking action. There are three major regional efforts underway to trade carbon emissions. More than 800 mayors have pledged to meet the Kyoto Protocol targets for their communities. More than half of all U.S. states have passed renewable portfolio standards (RPS). In response to calls for a green industrial revolution and rising consumer interest in environmentally-conscious goods and services, certain sectors of U.S. industry are repositioning to take advantage of opportunities in the climate and energy markets. Federal and state-level incentives, and soaring global demand, are boosting returns for firms that supply clean energy technologies and renewable energy. It should be noted, however, that not all U.S.

industries can adapt in equal degree to a greener economy. Companies dependent on natural gas, for instance, are suffering from high fuel prices.

U.S. courts are also involved in shaping U.S. environmental policy. In 2007, the U.S. Supreme Court ruled that the Environmental Protection Agency (EPA) has authority under the Clean Air Act to regulate carbon dioxide and other GHG emissions. The EPA has not implemented this landmark decision yet, which may have far-reaching implications for federal climate change policy, state-level efforts to address GHG emissions, and U.S. industry. The U.S. court system will continue to play a role in this complex area.

While there are a number of promising developments in the United States regarding climate change and energy, the various measures may be overshadowed and curtailed by the economic crisis. Costs matter to politicians and to voters, and dollars and cents – in the form of employment, jobs, wages and economic productivity – can drive policy. The following pages examine these matters in greater detail.

THE EFFECT OF THE CURRENT ECONOMIC TURMOIL ON CLIMATE POLICY ASPIRATIONS

Capital markets are experiencing extreme volatility in key markets around the globe. Late last year, markets in New York City, Frankfurt and Paris registered record-setting declines and gains. Increasingly, Adam Smith's "invisible hand" is being supplanted by visible, public sector guidance. To stem the bleeding, government officials in the United States, France, Germany, Japan, the U.K. and elsewhere are taking extraordinary measures: they are acquiring stakes in financial institutions, providing capital to purchase depressed assets, guaranteeing outstanding loans, and urging banks to lower lending rates to revive flagging credit markets. The 110th Congress passed a \$700 billion rescue package to shore up Wall Street and to prevent further erosion of the U.S. economy, and the 111th Congress may pass soon an even larger stimulus package. So far, Congressional efforts have focused on the financial sector. Other sectors of the economy are wondering when their aid will arrive. Struggling U.S. automakers are set to receive up to \$25 billion in loan guarantees; another \$25 billion may follow later this year. Producers of ethanol seek assistance also.

Environmental policy will not escape the financial crisis unscathed. In Washington, opponents of a GHG cap-and-trade system are predicting popular backlash if Congress enacts expensive climate legislation. European Union environment ministers have declared that, for the EU to agree to a global GHG emissions pact at the United Nations climate talks in Copenhagen in December 2009, advanced developing nations will have to commit to lower emissions by 15 to 30 percent below "business as usual" scenarios by

2020. Italy and Poland allege that they cannot afford to meet ambitious EU climate and energy targets. Rapidly developing nations continue to argue that industrialized nations should assume the lion's share of GHG reductions.

WILL THE WALL FALL AGAIN?

Nearly twenty years ago, the Berlin Wall cracked, presaging the unification of West and East Germany. The convulsions in the U.S. capital markets are prompting some to question whether another well-known "wall", Wall Street, is poised to fall. While the extreme measures taken by President Bush and his EU counterparts may be limiting the damage in the capital markets, the tumult may portend adverse consequences for U.S. climate change and energy policy, especially in the near term. The volatile financial markets are increasing costs, eroding stability, and causing anxiety. The effect on climate change policy in the United States is especially pernicious. The 110th Congress held numerous hearings on environmental issues but could not pass comprehensive federal legislation on GHG emissions or fundamentally address U.S. dependence on oil imports. The Democratic majority could not muster the votes necessary to move legislation in these contentious, complex areas.¹ Reaching bipartisan agreement this year (in lieu of a filibuster-proof majority in the Senate, seemingly out of reach) will not get easier with Wall Street on the ropes.

Compared to counterparts in the EU, U.S. industry, in aggregate, has come rather late to the environmental table. Last summer, industry groups lobbied to torpedo a Senate bill that would have created a cap and trade system. Some companies continue to question the prudence of taking action to forestall or mitigate the possible effects of climate change. But change is afoot. In response to growing consumer demand for "green" products and services, and in growing recognition that it is possible to earn green (profit) by being "green", U.S. businesses are incorporating sustainability principles into operating strategies, investing in clean technologies, and pursuing options to lower energy use and shrink their carbon footprint. New York Times columnist Thomas Friedman notes that green is becoming the new "red, white and blue" in America. He argues that green lifestyle practices must penetrate "Main Street" to trigger truly widespread change. Transforming the Board Room is critical, too. There has been improvement in this area.

¹ Sixty votes are needed in the Senate to overcome procedural tactics; a simple majority normally suffices in the House to pass legislation.

But companies cannot exist on public relations and corporate strategy alone. To survive they require fresh capital, willing consumers and affordable prices. The financial situation in general, and the frozen credit markets in particular, are affecting U.S. companies large and small. To cope with shrinking cash flow, elevated borrowing costs, more expensive inputs and uncertain business prospects, many businesses will retrench. They will forego or curtail expensive investments, reconsider the utility of investigating new technologies, and concentrate on core products and services. These decisions may have disproportionate adverse effects on environmental objectives, clean technology R&D, and sustainability initiatives.

Given sharp political differences, and growing anxiety about the U.S. economy, enacting comprehensive, ambitious climate change and energy policy in the near term will be difficult. However, while it is still a bit too early to know how Obama will translate his stated environmental priorities into specific action steps, Congress may take action on climate change in the first half of this year.

FEDERAL CLIMATE AND ENERGY POLICY

PRESIDENT BUSH: MORE PRO-ACTIVE THAN GENERALLY RECOGNIZED

The Bush Administration did more to address climate change than is generally recognized. It took broad action with regard to energy and energy efficiency. President Bush signed two significant pieces of energy legislation, authorized hundreds of millions of dollars to fund R&D into clean technology, and launched multiple environmental initiatives. But there is no federal GHG legislation, the United States is not party to the Kyoto Protocol, the media documented the “emasculatation” of the EPA during Bush’s tenure, the oil industry continues to profit from substantial tax breaks, and little has been done to lessen America’s dependence on foreign oil. Accordingly, there is a perception, especially abroad, that the Bush White House did not do enough to address climate change, and that it lacked a coherent, future-oriented federal energy policy. A closer look reveals an administration that was more active on climate and energy than generally understood, but unwilling to take binding action on GHG emissions that might injure the U.S. economy, endanger U.S. jobs or confer competitive advantage on countries that lack comparable environmental regulations and standards (e.g., Brazil, China and India).

Key Policy Parameters

The Bush White House consistently opposed internationally binding emissions reductions for the United States in the absence of commensurate, if not identical, measures by all of the leading developed and developing economies. Accordingly, the Kyoto Protocol was rejected – among other reasons – for not subjecting all major economies to binding commitments. Despite joining the G8 Declaration on Environment and Climate Change in 2008, Bush continued to oppose mandatory targets for GHG emissions reductions.

The Bush Administration favored market-based, technology-driven, voluntary measures over “command and control” regulation. Bush sought to harness American industry by fostering clean technology R&D, spurring innovation, and letting market participants devise lower-cost solutions. He refused to pick “winners and losers”. In Bush’s perspective, technology incentives should be carbon-weighted (the lower the carbon profile of the technology, the greater the benefit) and long-lasting to provide investment certainty. Favored financial instruments included tax incentives and federal grants. Substantively, the focus was on “clean” coal, including carbon capture and sequestration (CCS) technology; biofuels, especially corn-based and next-generation cellulosic fuels; battery-powered plug-in hybrid vehicles; next-generation nuclear power; and measures to foster energy efficiency, including appliance standards and building codes for government buildings and offices.²

A Plan to Establish Net-Zero Energy Homes

In October, the National Science and Technology Council (NSTC)³ released a report calling for redoubled R&D to promote energy-conserving, state-of-the-art green building technology.⁴ The R&D proposal sought to lay the groundwork for the technologies, practices and policies required to produce net-zero energy homes and buildings via new construction and retrofits to existing stock. NSTC seeks to establish clear national goals for federal science and technology investments.⁵ The report’s timing and subject matter are apropos, as the construction and buildings sector consumes great quantities of energy, water and raw materials. The NSTC report claims that the buildings sector accounts for 40

² Federal funding in these areas is executed primarily by the Department of Energy and the U.S. Environmental Protection Agency.

³ <http://www.ostp.gov/cs/nstc>. Established by Executive Order in 1993, NSTC is a cabinet-level council charged with coordinating science and technology policy within the executive branch.

⁴ Federal Research and Development Agency Agenda for Net-Zero Energy, High-Performance Green Buildings..

⁵ Per NSTC, federal agencies collectively fund \$130 million-\$150 million annually in building R&D.

percent of U.S. primary energy use – and GHG emissions.⁶ Under current trends, by 2025, buildings may be the top global energy consumer worldwide.

Many of the report’s recommendations flow from provisions in EAct and EISA. For example, the goal of the U.S. Department of Energy’s Net-Zero Energy Commercial Buildings Initiative – to achieve net-zero net energy buildings for all U.S. commercial buildings by 2050⁷ - stems from EISA.⁸ Per NSTC’s recommendations, next-generation commercial and residential housing should sharply cut GHG emissions, double the useful lives of building materials, products and systems, reduce water use by half, maximize water recycling and rainwater capture, and enhance occupant comfort.

A Plan to Boost Domestic Energy Resources

The Outer Continental Shelf (OCS) consists of the submerged lands, subsoil and seabed that lie between the respective areas of state and federal jurisdictions.⁹ The U.S. Secretary of the Interior administers mineral exploration and development of the U.S. OCS, which has been divided into four leasing regions.¹⁰ The U.S. OCS is thought to contain large reserves of oil and natural gas.¹¹ In 1981, Congress adopted the OCS Moratorium, barring the leasing of coastal waters off the Atlantic and Pacific coasts and Alaska’s Bristol Bay for fossil fuel development. In 1990, President George H.W. Bush initiated an executive prohibition on new leasing until 2002. President Bill Clinton extended the ban to 2012.¹² In July 2008, President Bush lifted the executive ban, urging Congress to follow suit, and to take additional action to increase production of energy resources by permitting drilling in Alaska’s Arctic National Wildlife Refuge (ANWR), expanding domestic refining capacity, and promoting efforts to recover oil from shale in areas such as the Green River Basin of Colorado, Utah and Wyoming.¹³

⁶ *Federal Research and Development Agency Agenda for Net-Zero Energy, High-Performance Green Buildings*, pg. 5.

⁷ <http://www.eere.energy.gov/buildings/highperformance/>. In 2003, based on data compiled by the U.S. Department of Energy, there were 4.9 million commercial buildings in the U.S. occupying 71.7 billion square feet of floor space. *Federal Research and Development Agency Agenda for Net-Zero Energy, High-Performance Green Buildings*, pg. 10.

⁸ Title 4, Subtitle B, Section 422c.

⁹ State jurisdictions generally end 3 miles offshore.

¹⁰ The Minerals Management Service (MMS) manages OCS and mineral revenues from Federal OCS and Federal and Indian lands.

¹¹ According to a June 2008 White House memo: “86 billion barrels of oil and 420 trillion cubic feet of natural gas...about 18 billion barrels of oil and 77 trillion cubic feet of natural gas exist in OCS areas under moratoria. Oil and gas from opened areas in the OCS could come to market within 10-15 years.” *American Made Energy*, June 2008. Per former Interior Secretary Dick Kempthorne: “[OCS] areas under restriction could produce 10 years worth of America’s current annual oil production.” http://www.doi.gov/news/08_News_Releases/080714a.html.

¹² Covering 85% of the OCS in the lower 48 states. http://www.doi.gov/news/08_News_Releases/080508a.html.

¹³ Experts estimate there are 11 billion barrels of recoverable oil in ANWR and 800 billion barrels of recoverable oil in the Green River Basin.

Major Economies Meeting on Energy Security and Climate Change

To re-engage the United States in the international debate on climate change, prior to the G8 Summit in Germany in 2007, President Bush announced a process to gather the world's largest economies to negotiate an agreement on a long-term goal for GHG emissions cuts post-Kyoto. At the fourth Major Economies Meeting (MEM), held parallel to the G8 Summit in June 2008, a day after G8 leaders agreed to support a 50 percent global reduction in GHG emissions by 2050, the MEM parties¹⁴ released a declaration committing to actions to address climate change and to reduce emissions. The agreement called for a shared vision on climate change that “assures economic growth”, and calls for mitigation measures that are “ambitious, realistic, and achievable.” However, it did not include any concrete targets or deadlines.

The G5 nations (China, India, Brazil, Mexico, and South Africa) sought a more ambitious outcome, i.e. 85-90 percent emission cuts by the G8 countries by 2050, and 25-40 percent cuts by 2020. The G8 nations resisted. The South African Environment Minister claimed that the absence of a midterm reduction target in the G8 statement prompted developing nations to oppose a 50 percent global reduction target in the MEM declaration. The leaders agreed to meet again at the 2009 G8 Summit, and several countries have expressed an interest to continue the MEM gatherings.

Clean Technology Fund

In his 2008 State of the Union Address, Bush proposed a new international clean technology fund to help developing nations use clean energy and clean technology. In July 2008, the World Bank's board of executive directors formally approved the establishment of the Climate Investment Funds (CIF) to provide grants and loans to developing countries for promoting climate change mitigation and adaptation projects.¹⁵ CIF is intended to offer bridge financing until a post-Kyoto agreement is in place. It will consist of two trust funds: the Clean Technology Fund (CTF) and the Strategic Climate Fund (SCF). CTF will focus on funding projects in developing countries to mitigate climate change. STF will focus on adaptation. Roughly three-quarters of CIF funds are expected to go to CTF. In September 2008, ten countries pledged an aggregate \$6.1 billion to support CIF.¹⁶

¹⁴ Present in Japan: Australia, Brazil, Canada, China, the EU, France, Germany, Indonesia, India, Italy, Japan, Mexico, South Korea, Russia, South Africa, the UK, and the U.S.

¹⁵ In May 2008, representatives of 40 industrialized and developing countries agreed to CIF.

¹⁶ Australia, France, Germany, Japan, the Netherlands, Norway, Sweden, Switzerland, the U.K, and the U.S. The top four contributors: U.S. (\$2.0 billion), U.K. (\$1.5 billion), Japan (\$1.2 billion), and Germany (\$813 million).

<http://web.worldbank.org/WBSITE/EXTERNAL/NEWS/0,,contentMDK:21916602~pagePK:34370~piPK:34424~theSitePK:4607,00.html>.

Securing the monies for actual disbursement may be difficult, given the respective authorization procedures, budget deficits and economic pressures in some of the contributing nations. Still, the initiative is off to a promising start. The first projects to receive CIF funding are expected to be announced later this year.

International Partnerships

The Bush Administration participated in several international, non-binding initiatives including the Methane to Markets Partnership (MMP) and the Asia-Pacific Partnership on Clean Development and Climate (APP). MMP joins national governments and private sector participants to promote cost-effective methane recovery and its use as a clean energy source.¹⁷ The fourteen founding governments — comprising 60 percent of global methane emissions from targeted sources — made declarations to minimize methane emissions and affirmed the importance of methane capture projects, especially in developing countries. The Partnership focuses on four sources of methane emissions: 1) animal waste management; 2) coal mines; 3) landfills; and 4) oil and gas systems. At present, another ten national governments plus the European Commission have become partners of the MMP.¹⁸

APP is a non-binding framework for accelerating the development and deployment of clean energy technologies.¹⁹ APP partners²⁰ have agreed to work together and with the private sector to meet goals for energy security, national air pollution reduction, and climate change in ways that promote sustainable economic growth and poverty reduction. The Partnership is designed to be consistent with the U.N. Framework Convention on Climate Change and to complement, not replace, Kyoto Protocol commitments. At present there are eight public-private sector task forces.²¹ The seven APP partner countries represent over 50 percent of the world's economic output, population and energy use, produce 65 percent of the world's coal, 48 percent of the world's steel, 37 percent of the world's aluminum, and 61 percent of the world's cement.

¹⁷ <http://www.methanetomarkets.org/>.

¹⁸ The European Commission formalized its participation at WIREC (Washington International Renewable Energy Conference) in Washington, D.C. in March, 2008.

¹⁹ <http://www.asiapacificpartnership.org/>.

²⁰ Australia, Canada, China, India, Japan, South Korea, and the U.S.

²¹ 1) Aluminum; 2) Buildings and Appliances; 3) Cement; 4) Cleaner Use of Fossil Energy; 5) Coal Mining; 6) Power Generation and Transmission; 7) Renewable Energy and Distributed Generation; and 8) Steel.

THE U.S. COURTS: INFLUENTIAL CLIMATE AND ENERGY POLICY PLAYERS

In response to a spate of lawsuits and legal challenges, especially by U.S. states challenging the federal government, U.S. courts are affecting U.S. climate and energy policy and delivering results that may not be possible in the political or policy arenas. In the wake of several landmark opinions in 2007, with key cases pending, and more lawsuits anticipated in 2009, the U.S. legal system will continue to play a role in shaping U.S. environmental policy. The most significant development may be the five-to-four Supreme Court ruling in *Massachusetts vs. EPA* that the latter has the authority under the Clean Air Act (CAA) to regulate carbon dioxide and other GHGs.²² This pressures EPA to reassert a legitimate basis for not regulating GHGs (which would be likely to provoke further litigation), or to fashion a process for doing so. In July 2008, EPA issued an Advance Notice of Proposed Rulemaking (ANPR)²³ describing how it might regulate GHG emissions under the CAA, and seeking input on how to respond to the court's ruling.²⁴ The 120-day comment period ended on November 28, 2008.²⁵ There is concern among some industry groups that the ANPR goes beyond the scope of the court's ruling and that disproportionate regulation could have unwarranted adverse effects on the U.S. economy. To mobilize political support to block potential overreaching by EPA, the U.S. Chamber of Commerce sent a letter to Congress, urging Members to enact legislation to bar EPA from proceeding. The 110th Congress debated but did not pass legislation to proscribe EPA from regulating GHG emissions under the CAA. The issue will be revisited by the Obama Administration.

A second important case involves California legislation to regulate GHG emissions from automobiles. California seeks to regulate tailpipe emissions. To do so, it needs a waiver from EPA. In the past, California has received such waivers. This time, EPA denied the petition. To avoid patchwork legislation at federal and state levels, the automobile industry is challenging the law in court. California is contesting the waiver denial. Both suits are pending. The California waiver situation has also generated political attention. In August 2008, Sen. Barbara Boxer (D-CA), with Sen. Dianne Feinstein (D-CA) and Speaker Pelosi, sought amicus curiae status²⁶ to petition the court in support of California's lawsuit. On January 26, President Obama ordered EPA to re-examine the basis for denying the waiver request and prepare to take "any appropriate action."

²² *Massachusetts v. EPA*, 127 S. Ct. 1438, 63 ERC 2057 (2007).

²³ ANPRs request comment on how to proceed on a given topic, a step that could result in regulations.

²⁴ *Federal Register* Vol. 73, No. 147. Wednesday, July 30, 2008. Pages 44354 – 44402.

²⁵ The ANPR docket is available at <http://www.regulations.gov/>, see docket EPA-HQ-OAR-2008-0318.

²⁶ The phrase, Latin for "friend of the court", refers to parties that are not directly involved in a given lawsuit but have an interest in the particular legal proceeding and have been granted permission to write the court.

A third key ruling pertains to the EPA Clean Air Interstate Rule (CAIR), issued in 2005 to address the interstate transport of sulfur dioxide (SO₂) and nitrogen oxides (NO_x) emissions, and the effect of such transport on the ability of “downwind” states to satisfy federal air quality standards.²⁷ CAIR sought to establish SO₂ and NO_x emission “budgets” for 28 states (and the District of Columbia). A trading scheme would be used to reduce emissions from power plants in upwind states to help downwind states attain national air quality standards.²⁸ NO_x reductions were scheduled to begin in 2009 followed by SO₂ reductions in 2010. Last July, the U.S. Court of Appeals for the District of Columbia vacated CAIR in its entirety,²⁹ dealing a serious blow to CAIR and EPA’s other air regulatory programs, affecting states, power companies and the emissions markets. The decision created significant uncertainty within the electric power industry, as many companies had based large investment decisions in emissions control technology and operations strategies on the assumption that the program would remain in place.

Court Reverses CAIR Decision: What Next?

In December, the D.C. Appeals Court reversed the July decision, agreeing with a group of petitioners (which included parties that had prevailed in July) that the ruling should be remanded to EPA for recorection, versus scrapping CAIR entirely. In consequence, the current CAIR will remain in effect until a new rule is promulgated. CAIR is regarded as one of the most important stationary air pollution issues facing the Obama Administration and the new team at EPA.

U.S. CONGRESS

The 110th Congress struggled to find its environmental footing. After passing a large energy bill at the end of 2007, Congress was unable to enact comprehensive environmental legislation thereafter. The stalemate reflected differing interests, the complexity and significance of the issues at stake, the slim Democratic majority in the Senate, Speaker Pelosi’s unusual practice of sending legislative proposals directly to the House floor, bypassing the standard committee process, and concern that rash environmental legislation could inflict undue harm on the U.S. economy. In September and October, Congress did manage to move two pieces of environmental legislation.

²⁷ The CAA requires “upwind” states to adopt emissions control measures to address interstate transport of emissions.

²⁸ Once operational, the CAIR cap and trade program would supplant the NO_x Budget Trading Program (NBP), a multi-state, market-based cap and trade program launched in 2003 to reduce NO_x emissions from power plants and other large combustion sources (primarily boilers and turbines) in the eastern U.S.
<http://www.epa.gov/airmarkets/progsregs/nox/sip.html>.

²⁹ *North Carolina v. EPA*, No. 05-1244, Slip Op. (D.C. Cir., July 11, 2008).

The legislative calendar of the 111th Congress will be packed with environmental topics. Key issues include: climate change legislation; the lifting of the ban on offshore drilling in 2008 (whether to reinstate the ban); funding for CCS technology; protecting against cyber-threats against power plants; automobile fuel efficiency standards; and, creating green jobs. Enacting legislation in these areas may prove difficult, despite the increased Democratic majorities, especially if the U.S. economy fails to rebound.

Leadership Changes Signal Potential Shift in Environmental Policy

Recent leadership changes in the 111th Congress signal a potential shift in environmental policy, especially in the House of Representatives. In the influential Committee on Energy and Commerce, which has primary jurisdiction over climate change, Rep. Henry Waxman (D-CA) has replaced longstanding Rep. John Dingell (D-MI) as Chairman. Rep. Edward Markey (D-MA) has replaced Rep. Rick Boucher (D-VA) as Chairman of the re-named Subcommittee on Energy and Environment. Reps. Waxman and Markey are considered more “green” than Reps. Dingell and Boucher, respectively. These changes may have considerable influence on the tenor of Congressional policy in environmental areas. Waxman has already held a hearing on climate change, and announced his intention to pass comprehensive climate and energy legislation through the committee by Memorial Day (May 25).

Interestingly, Markey continues to serve as Chairman of the Select Committee on Energy Independence and Global Warming, which does not have the authority to write legislation. Some observers question the need to retain the Select Committee, created at the behest of Speaker Pelosi, now that Waxman and Markey have assumed leadership positions in the Energy and Commerce Committee.

The Votes Have Been Counted

A scorecard issued in October by the League of Conservation Voters (LCV), a 501(C)(4) organization that advocates for sound environmental policies and the political candidates who will implement them,³⁰ assigned mixed marks to the 110th Congress, citing “great promise” but also “missed opportunities” and “major steps backward.”³¹ For 30 years, LCV’s “National Environmental Scorecard” has ranked Members of Congress according to their voting records on conservation and energy issues.³² Given the enactment of EISA in 2007, a massive bill that increased fuel efficiency standards for cars and light trucks for

³⁰ <http://www.lcv.org/>.

³¹ <http://www.lcv.org/newsroom/press-releases/league-of-conservation-voters-releases-2008-national-environmental-scorecard.html>.

³² <http://lcv.org/scorecard/>.

the first time in 22 years, LCV had high hopes for the 2008 term of the 110th Congress but they were dashed by Congress' inability to pass additional environmental legislation, despite historic gasoline and crude oil prices and additional scientific proof regarding the onset of climate change.

From LCV's "left of center" perspective, the 110th Congress regressed, permitting the ban on offshore drilling to expire, sustaining tax breaks for the oil industry, and allowing a "minority of Big Oil allies" to help block enactment of climate change legislation (the Warner-Lieberman bill).³³ The Report chided Senate Republicans, and some conservative House Democrats, for spending too much time arguing over how to finance the extension of expiring tax credits for clean energy, instead of ensuring that the important tax measures would be renewed prior to their expiration on December, 31, 2008.³⁴

Rep. Dingell (D-MI) Unveils Climate Change Draft

Last October, while still Chairman of the House Committee on Energy and Commerce, Rep. Dingell (D-MI) unveiled a 461-page draft (Dingell Draft) to revive the climate change debate. The bill tracked closely to Obama's climate change campaign platform but differed in key respects from prior climate change bill proposals. The Dingell Draft sought to cut U.S. GHG emissions by 80 percent below 2005 levels by 2050 (Obama's campaign plan called for lowering U.S. GHG emissions by 80 percent below 1990 levels by 2050). It barred states and regions from pursuing sub-national carbon emissions trading schemes.³⁵ This is especially important, given the three regional cap and trade programs in development, and California's plans to build a statewide trading system. To address concern that cap and trade activity could injure the U.S. economy, the Dingell draft imposed lower GHG emissions cuts in the early years of the trading program compared to other proposals.³⁶

The draft did not address every issue. It left undecided how to allocate emissions allowances, identifying four options. One option would distribute the allowances for free to power plants and other stationary sources. (the Warner-Lieberman Act sought to auction power plant permits. Obama's campaign program called for auctioning 100 percent of allowances.) The proposal tasked EPA with establishing a program to regulate

³³ <http://www.lcv.org/newsroom/press-releases/league-of-conservation-voters-releases-2008-national-environmental-scorecard.html>.

³⁴ Congress ultimately extended many of the expiring tax credits.

³⁵ Per Section 733: "no state, local, or regional authority may adopt or enforce a program that caps the amount of greenhouse gases that may be emitted or sold, and that uses tradable emission allowances."

³⁶ For example: the Dingell draft calls for a 6% cut in GHG emissions versus 2005 levels by 2020. The 2008 Markey bill (H.R. 6186) called for a 20% cut over the next 12 years; the original Warner-Lieberman text (S. 2191) mandated a 15% cut over the next 12 years.

emissions from sources that emit fewer than 25,000 tons of GHG per year. To lower industry compliance costs, covered sources would be permitted to purchase offsets, under EPA management, via domestic and international projects.

The draft authorized the Federal Energy Regulatory Commission (FERC) to create an oversight board to guard against fraud and manipulation in the emissions trading market. With longstanding jurisdiction over FERC, the House Energy and Commerce Committee would assign to itself a central role in shaping U.S. climate change legislation by allocating tasks to FERC.

After watching the Senate dominate the climate change agenda for much of 2008, House Democrats are expected to be more active this year, although Rep. Waxman may be more disposed to cooperate with Sen. Boxer, Chairman of the Environment and Public Works Committee, as both hail from California, than was the case with former Chairman Dingell.

Turf Battles Loom Regarding Climate Change Legislation

As illustrated by the Democrats' inability to pass a climate change bill in 2008, the substance of climate change poses a formidable challenge. The procedural element should not be overlooked, however. Shepherding federal climate change legislation through Congress will require acceptable substance *and* procedural finesse. Typically, the House Committee on Energy and Commerce would exert primary jurisdiction over climate change. This would hold for the Senate Committee on Energy and Natural Resources, too. Per standard operating procedure, the two committees would take first crack at drafting the necessary legislation and confer with Congressional leaders to prepare a text capable of passing both chambers. Standard operating procedure may not apply to climate change. As observed last year, the topic is arousing the interest of multiple committees, spurring a plethora of hearings and proposals. There are jurisdictional, strategic and political forces at work.

Last year, Speaker Pelosi sought to form a new committee to address climate change, circumventing Rep. Dingell's role as Chairman. Rep. Dingell resisted, viewing the stratagem as an attempt to wrest jurisdiction from his committee. As compromise, the Select Committee on Energy Independence and Global Warming was formed. The Select Committee can hold hearings but cannot introduce legislation. It does not fit neatly into the committee structure procedurally. Pundits assert it has caused fissures within Democratic ranks. There are bicameral considerations, too. In the Senate, Boxer's Committee has been more engaged on climate than the Committee on Energy and Natural Resources, chaired by Senator Jeff Bingaman (D-NM). If the House Committee on Energy and Commerce takes the lead on climate change this year, Sen. Bingaman's

committee would be the natural counterpart. This could have political and substantive consequences.³⁷

FERC Ready to Oversee Cap & Trade System

FERC welcomed the opportunity to oversee a cap and trade market in the United States, as envisioned in the Dingell Draft.³⁸ The Dingell Draft would create a new Office of Carbon Market Oversight within FERC to protect against fraud and market manipulation. Prior climate change legislation, including the Warner-Lieberman bill, which did not survive a procedural vote in June, contained similar provisions for market oversight but did not assign the task to FERC. While the former Chairman of FERC, Joseph Kelliher, was enthusiastic about the role FERC might play in a carbon trading scheme, it remains to be seen which agencies would perform which roles under a national system of cap and trade, assuming Congress passes such legislation.

Can Cap and Trade Happen in the USA?

Cap and trade receives a lot of ink in the United States but cap and trade proposals face stiff resistance from certain industry groups, conservative-leaning think tanks, numerous politicians, and sizable numbers of American citizens.³⁹ The opposition is based in large measure on cost, the conviction that a cap and trade system would saddle the U.S. economy with an unacceptably large invoice, the payment of which could erode the competitiveness of U.S. businesses, threaten the survival of carbon-intensive industries, force other companies out of business, and endanger U.S. jobs. No one in Washington will support a policy with these dire consequences.⁴⁰

Price can shape public policy. In response to the oil price shocks in the 1970s, policymakers in Washington enacted a series of programs to cushion against the consequences of future shocks and to modify U.S. consumption of oil and gas (e.g., Strategic Petroleum Reserve, SPL).⁴¹ The programs were largely abandoned in the 1980s,

³⁷ A posting to a law firm's energy blog noted: "[Sen.] Bingaman is on record favoring less aggressive carbon controls [than Sen. Boxer does], a position more in sync with the Dingell discussion draft."

<http://energylegalblog.com/default.aspx>.

³⁸ <http://www.ferc.gov/>.

³⁹ There are cap and trade supporters, too. Last October, 152 Members wrote Speaker Pelosi to urge prompt action to address climate change. They advocated a climate regime that cuts GHG emissions by 80% vs. 1990 levels by 2050, sets midterm targets (cuts of 15-20% by 2020), and requires periodic scientific review coordinated by EPA.

⁴⁰ It is sometimes forgotten that the U.S. pioneered the concept of realizing environmental objectives (lower lead in gasoline, cut harmful discharges into rivers) through trading programs. The programs developed to slash the emissions of two pollutants (SO₂ and NO_x) that cause Acid Rain – the Acid Rain Program, ARP, and the NO_x Budget Trading Program, NBP – have delivered strong results..

⁴¹ SPR, a complex of four sites with deep underground storage caverns in salt domes along the Texas and Louisiana Gulf Coast, is the largest stockpile of government-owned emergency crude oil in the world. SPR has a physical capacity of 727

www.facet-online.org

when the price of oil sank and fossil fuels became “inexpensive” again. Through the 1980s and much of the 1990s, the United States enjoyed a period of relatively low energy prices, especially when compared to price levels in Western Europe. In short order Americans rediscovered their love of the open road. Many came to view low energy prices as a kind of entitlement. At present, price is exerting a vicious, pincer-like hold on climate change policy, especially in the context of cap and trade. The former argument against instituting a cap and trade scheme in the United States – prior to the sharp rise in energy prices that developed last year – was that prevailing energy and commodity prices were too low to create the incentive needed to assign a price to carbon. Because the economic fundamentals were not present, it was argued that it would be too difficult to amass the political will, and the interest of the American public, to support such a policy.

Then the price of oil began to climb. Commodity prices soared to record highs. The price of gasoline crept upward. At its height last year, oil crested just under \$150 a barrel, and gasoline exceeded \$5-a-gallon at some U.S. pumps. The price of natural gas spiked forcing fertilizer producers out of business and foreshadowing the prospect of severe heating bills this winter. These developments were well underway when the U.S. housing market started to sag last year, when owners began falling arrears in their mortgage payments, when mortgage-backed securities started to decline in value, and financial institutions were forced to absorb huge write-downs in asset values and started to run low on cash and capital. These developments have prompted a new argument in opposition to cap and trade. The new rationale is that, given the tenuous state of the U.S. economy, it would be too expensive to usher in a cap and trade regime now. It is argued that the additional costs and the uncertain second-order effects associated with the implementation of such a large regulatory mechanism would place unacceptable pressure on the U.S. economy.

Congress Extends Tax Credits

After months of debate and multiple failed votes, the 110th Congress finally renewed a set of expiring tax credits relating to clean energy technologies and renewable energies. In October, Bush signed the \$700 billion financial rescue packet (Emergency Economic Stabilization Act of 2008, H.R. 1424).⁴² The package authorized \$150 billion in tax cut extensions, including \$17 billion in new tax incentives and extensions for clean energy sources. The extensions cover wind, solar, and biomass projects; constructing energy-

million barrels. There are plans to expand it to hold 1.5 billion barrels. The average price paid for oil in the reserve is \$28.42 per barrel. The maximum amount of oil (in barrels) that can be released from the reserve per day is 4.4 million. It would take 13 days, from the date of a Presidential decree, for the released oil to enter the U.S. market.

⁴² http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110_cong_bills&docid=f:h1424enr.txt.pdf.

efficient buildings; investing in solar electric systems; installing efficient home heating and cooling equipment; manufacturing efficient home appliances; retrofitting existing homes; and purchasing plug-in hybrid vehicles. The package authorized \$10.9 billion in renewable energy tax incentives directed at clean energy production, \$2.6 billion in incentives regarding cleaner vehicles and fuels, and \$3.5 billion in tax breaks to promote energy conservation and energy efficiency.⁴³ In partial compliance with the House pay-as-you-go budgetary rules, the cost of the renewable energy and energy efficiency tax provisions was fully offset by repealing certain oil and gas subsidies (the other tax measures were not offset).

The solar industry received a big boost: the Section 48 investment tax credits for the purchase of solar equipment and “concentrated” (i.e., large-scale) projects were extended to 2016.⁴⁴ The Section 45 production tax credit for wind power, however, was only extended for one year. The production tax credit for biomass and geothermal sources was extended for two years. Marine and hydrokinetic energy were added as eligible resources. The bill included a tax credit for the purchase of plug-in hybrid-powered vehicles, and an investment credit for the expansion and modification of clean coal technologies. Industry analysts and business executives expect the tax extensions to stimulate the creation of thousands of “green” jobs, spur additional investment in clean energy and renewable energy technologies, and trigger the resumption of energy projects that were placed on hold because of the uncertainty surrounding the tax measures.⁴⁵

Will President Obama Keep his Campaign Pledges?

During the final stages of the 2008 Presidential election campaign, then-candidate Sen. Obama unveiled a bold plan to solve America’s “addiction to foreign oil” in Lansing, Michigan, an economically challenged city with deep roots to the U.S. automotive industry.⁴⁶ He called for investing \$150 billion over 10 years to commercialize plug-in hybrid vehicles to ensure that the fuel-efficient cars of tomorrow “are built in the U.S.” To place 1 million plug-in hybrid vehicles on the roads by 2015, purchasers would receive \$7,000 tax credits; automakers would get \$4 billion in tax credits to assist with retooling their aging factories.

⁴³ According to the Joint Committee on Taxation (JCT).

⁴⁴ JCT estimated the value of these extensions at \$1.9 billion.

⁴⁵ Cycling enthusiasts take note: thanks to Rep. Earl Blumenauer (D-OR), starting this January, employers can grant workers who commute to work by bicycle up to \$20 per month for their transport-related expenses, similar to the tax-deductible employer contributions permitted for employee public transportation and parking expenses.

⁴⁶ <http://www.barackobama.com/issues/energy/>.

Candidate Obama pledged that, if elected President, he would take immediate action to eliminate, in ten years, the need to import oil from the Middle East and Venezuela. His plan would require 10 percent of the nation's energy to come from renewable sources by 2012, and 25 percent by 2025. The plan would extend the alternate energy federal tax credit for five years, and modernize the national utility grid to accommodate electric power from new sources. There would be funding for nanotechnology research to make solar cells cheaper, and for CCS research. Regarding climate change, the plan would implement energy efficiency measures and a cap and trade program with a goal to cut GHG emissions by 80 percent below 1990 levels by 2050. The plan would reallocate a portion of oil companies' "windfall profits", giving each American a \$500 credit, and release some light crude oil from SPR. Candidate Obama indicated that he would consider limited offshore drilling if necessary to pass a comprehensive plan on energy. He emphasized that current leaseholders should be required to develop the lands they hold under lease or relinquish the leases ("use it or lose it"). The early indication is that President Obama is endeavoring to stick by his word in these complex areas. He has formed a "green" environmental leadership team and is talking boldly about creating millions of "green-collar" jobs and ending U.S. reliance on foreign oil. Time will tell if Pres. Obama can deliver true results with respect to these ambitious proposals.

Feed-In Tariff Proposal

Last June, Rep. Jay Inslee (D-WA) introduced legislation modeled after Germany's Renewable Energy Law (EEG). The Renewable Energy Jobs and Security Act (H.R. 6401) sought to provide guaranteed renewable energy payments to small and mid-sized clean energy suppliers up to 20 megawatts (MW) in size. There were three components to provide investment security: guaranteed grid interconnection; long-term, fixed-rate contracts with electric utilities; and, a rate recovery program through a regional cost-sharing commission to minimize adverse effects on consumers. The legislation was endorsed by more than 80 NGOs, renewable energy companies and clean-energy investors, and referred to the House Energy and Commerce Committee. It is unclear if the bill (or something similar) will be reintroduced this year.

Energy Independence and Security Act

In December 2007, Bush signed broad energy legislation (EISA, H.R. 6) into law. Congress boosted fuel economy standards for the first time since 1975. The bill directed the U.S. Transportation Department to raise the average fleet fuel economy standard for cars and light trucks to 35 miles-per-gallon by 2020, starting in 2011. Analysts predicted that the increase would cut U.S. oil consumption by more than 4 million barrels per day by 2030. Ethanol producers in the Midwest secured a five-fold increase in the renewable fuels

standard to 36 billion gallons by 2022. Refiners are required to blend 9 billion gallons of ethanol into the nation's fuel supply in 2008. The mammoth bill included stronger energy efficiency standards to phase out most incandescent light bulbs by 2012-2014. It expanded the CCS program to trap CO₂ emissions from coal-fired power plants. New federal buildings will have to eliminate fossil fuel-generated electricity by 2030. It contains new incentives for fuel-efficient plug-in hybrid cars, too. On January 26, President Obama ordered the Secretary of Transportation and the Administrator of the National Highway Traffic Safety Administration (NHTSA) to take action to comply with the portion of EISA that calls for strengthened fuel efficiency standards for cars and light trucks, starting with model year 2011. They were ordered to publish a final rule, by March 30 of this year, setting forth increased CAFE standards for the 2011 model year, and to prepare to issue a separate final rule to deal with model years after model year 2011.

SUBNATIONAL DEVELOPMENTS

In the absence of federal action on climate and energy, U.S. states are entering regional agreements and taking unilateral action. A similar trend exists at the city, county and local levels. Across the country, there is a proliferation of laws, investments, regulations and initiatives regarding climate and energy. Three regional cap and trade programs are in development. California is designing a statewide scheme. New York City has set a series of ambitious environmental goals. Some 850 U.S. mayors, representing 80 million citizens, have signed the U.S. Conference of Mayors Climate Protection Agreement, pledging to meet the Kyoto Protocol targets. The efforts raise two threshold questions: whether state or even regional programs can deliver meaningful results, given the scope of the environmental challenges, and whether it will be possible to effect significant change without endangering the respective local economies. Also unclear is how the regional cap and trade schemes would fit into a prospective national system.

REGIONAL INITIATIVES

Regional Greenhouse Gas Initiative

The Regional Greenhouse Gas Initiative (RGGI) is an effort by ten Northeastern and Mid-Atlantic states⁴⁷ to reduce CO₂ emissions through a emissions cap on the electric

⁴⁷ Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont. The District of Columbia, Pennsylvania, the Eastern Canadian Provinces, and New Brunswick are observers.

www.facet-online.org

generating sector, coupled with an emissions trading program.⁴⁸ RGGI is the first cap-and-trade program to control CO₂ emissions in the United States. It will begin capping emissions later this year. Each state is given “allowances” for its emissions (one allowance equals one ton of CO₂). Electricity generators need an allowance for each ton of CO₂ emitted. Beyond the requirement that at least 25 percent of allowances be allocated “for a consumer benefit or strategic energy purpose,” each state has discretion over the distribution of its allowances. It can distribute them to generators for free, sell them by auction, or do a combination. Participants will stabilize regional power sector CO₂ emissions at their capped level through 2014 then reduce the cap by 10 percent (2.5 percent per year) between 2015 and 2018. In future, RGGI may include other emissions sources and additional GHG. RGGI held a successful first-in-the-nation auction of CO₂ allowances on September 25.⁴⁹ The allowances cleared at \$3.07 per allowance, netting \$38.6 million.⁵⁰ A second auction occurred December 17; the third takes place on March 18.

Midwestern Greenhouse Gas Reduction Accord

In November 2007, the governors of nine Midwestern states and a Canadian premier signed the Midwestern Greenhouse Gas Accord (the Accord)⁵¹ at the Midwestern Governors Association (MGA) Energy Security and Climate Change Summit.⁵² The Accord will establish GHG reduction targets and timeframes consistent with MGA member states’ targets; develop a market-based, multi-sector cap-and-trade mechanism; create a system to track GHG emission reductions; and develop additional tools, such as low-carbon fuel standards and funding mechanisms. Last June, MGA wrote Congressional leaders, urging them to involve regions and states in national discussions over GHG reduction plans. MGA wants to ensure that federal action does not damage activities that state and regional entities have taken, and to share lessons learned with federal policymakers. MGA is a nonprofit, nonpartisan organization comprising the governors of 12 states.⁵³

⁴⁸ <http://www.rggi.org/>.

⁴⁹ The auction offered 12,565,387 CO₂ allowances. http://www.rggi.org/trading_auctions.htm.

⁵⁰ http://www.rggi.org/docs/rggi_press_9_29_2008.pdf.

⁵¹ <http://www.midwesternaccord.org/>. The current Accord members are: Iowa, Illinois, Kansas, Manitoba (Canada), Michigan, Minnesota and Wisconsin. Indiana, Ohio, Ontario (Canada) and South Dakota are observers.

⁵² The Midwestern states, plus Nebraska and North Dakota, adopted an *Energy Security and Climate Stewardship Platform* which establishes shared goals such as: timelines for improving energy efficiency, promoting bio-based products, generating renewable electricity, and developing CCS technology.

⁵³ <http://www.midwesterngovernors.org/>.

Western Climate Initiative

The Western Climate Initiative (WCI) was launched in 2007 to develop regional strategies to address climate change.⁵⁴ WCI has set a regional goal of lowering GHG emissions by 15 percent below 2005 levels by 2020.⁵⁵ Once operational, WCI will cover the emissions of six GHG⁵⁶ from multiple sectors.⁵⁷ Last July, WCI released a draft of recommendations for establishing a regional carbon market (and other mechanisms) to meet the 2020 GHG reduction goal. The document calls for a multi-sector trading scheme initially to include power plants, large industrial operations, and commercial facilities. The transportation and heating fuels sectors would be added later. Regarding the cap and trade scheme, the draft proposes to regulate facilities generating 25,000 metric tons or more of GHG. Under the current plan, Phase I would be launched in 2012, and Phase II in 2015. Mandatory reporting of GHG would start in 2010.⁵⁸ The draft clarifies that individual jurisdictions may pursue measures other than an emissions trading scheme.⁵⁹ WCI hopes to finalize the plan in the coming months.⁶⁰

Virginia Governor to Press for Regional Action on GHG

As expected, Virginia Governor Tim Kaine (D), on the short-list to serve as President Obama's Vice-President before Sen. Joseph Biden (DE) was selected, is focusing his Chairmanship of the Southern Governors Association (SGA) on energy and climate change. Upon assuming the position last August, Kaine organized a town-hall style discussion of energy sustainability and climate change with his SGA counterparts.⁶¹ Kaine seeks to secure commitments from SGA member states to address GHG emissions by the end of his term this year. Compared to other areas of the country, Southern states have been less visibly responsive to the threat of climate change. The task may be formidable. According to the Southern Environmental Law Center (the Center), referencing data published by the U.S. Energy Information Administration, if Alabama, Georgia, North Carolina, South Carolina, Tennessee, and Virginia (all SGA Members) were a nation, it would rank seventh in the world for CO₂ emissions.⁶² In addition to generating a large

⁵⁴ <http://www.westernclimateinitiative.org/>.

⁵⁵ The regional goal reflects the combined reduction goals set by each WCI Partner. It does not replace those goals.

⁵⁶ CO₂, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

⁵⁷ Stationary sources, energy supply, residential, commercial, industrial, transportation, agriculture, and forestry.

⁵⁸ California has indicated it will use the WCI template as a model for its statewide cap and trade program.

⁵⁹ British Columbia, for instance, has instituted a carbon tax.

⁶⁰ WCI currently includes 7 U.S. states (Arizona, California, Montana, New Mexico, Oregon, Utah, and Washington) and 4 Canadian provinces (British Columbia, Manitoba, Ontario, and Quebec. U.S. observers: Alaska, Colorado, Idaho, Kansas, Nevada, and Wyoming. Canadian observer: Saskatchewan. Mexican observers: Baja California, Chihuahua, Coahuila, Nuevo Leon, Sonora, and Tamaulipas.

⁶¹ http://www.southerngovernors.org/Portals/0/pdfdocuments/SGA_AM08_Media_Advisory_072308.doc.

⁶² <http://www.eponline.com/articles/54648/>.

volume of CO₂ emissions from industrial sources, the region is highly dependent on automobile travel with few mass transit alternatives, according to the Center.

Renewable Portfolio Standards

The Department of Energy Office of Energy Efficiency and Renewable Energy (EERE), defines a renewable portfolio standard (RPS) as a “state policy that requires electricity providers to obtain a minimum percentage of their power from renewable energy resources by a certain date.” Per information on the EERE website, 26 U.S. states (plus the District of Columbia) have instituted RPS programs with binding targets, and another four states have set voluntary goals.⁶³ Many states allow utilities to comply with RPS requirements through tradeable renewable energy credits. According to data compiled by the Pew Center on Global Climate Change (Pew Center), 28 U.S. states have mandatory RPS programs and five have RPS programs linked to voluntary utility commitments.⁶⁴ Together these states account for more than half of the electricity sold in the United States.

While RPS range in ambition and definitions of renewable energy, they can deliver substantial GHG reductions. Texas is expected to avoid 3.3 million tons of CO₂ emissions annually through its RPS, which requires 2,000 MW of new renewable generation by 2009. Some RPS programs have changed in response to positive early results. In 2003 Connecticut expanded its RPS to all utilities in the state. Iowa met its standard in 1999. For some states, meeting RPS goals may prove difficult. A recent report issued by the California Public Utilities Commission (CPUC) indicates the state’s utilities will not meet the 2010 RPS deadline to sell electricity that originates 20 percent from renewable sources.⁶⁵

⁶³ http://apps1.eere.energy.gov/states/maps/renewable_portfolio_states.cfm. Last accessed November 2008..

⁶⁴ http://www.pewclimate.org/what_s_being_done/in_the_states/rps.cfm. Last accessed November 2008. The divergent EERE and Pew Center data can be reconciled as follows. Pew Center groups Missouri, Virginia, Utah, North Dakota and South Dakota in the “voluntary” bucket. EERE include Missouri, Virginia and Utah, plus Vermont in its “voluntary” bucket. It does not include the Dakotas. Pew Center puts Vermont in the “mandatory” category, plus Florida, which is absent from the EERE map. Pew Center does not list the District of Columbia.

⁶⁵ *Renewables Portfolio Standard Quarterly Report*, California Public Utilities Commission, July 2008.

<http://docs.cpuc.ca.gov/PUBLISHED/REPORT/85936.htm>.

www.facet-online.org

STATE INITIATIVES

California has a reputation, especially with regard to environmental issues, for “moving early” to enact legislation and implement experimental programs. Increasingly, other U.S. states, particularly along both coasts but also across the heartland, are taking action to address climate change and energy issues. This section highlights recent developments to give flavor for how some U.S. states are responding to these challenges.

New York Pushes Climate Change Disclosure Program

Acting under a 1921 state securities law (Martin Act) that grants the Attorney General the power to access corporate financial records, New York Attorney General Andrew Cuomo has reached agreement with two large energy companies to disclose material risks associated with climate change in future financial statements filed with the U.S. Securities and Exchange Commission (SEC).⁶⁶ Last October, Cuomo announced that Dynergy Inc. (2007 revenues: \$3.1 billion) would join Excel Energy (2007 revenues: \$10.0 billion) in the groundbreaking disclosure scheme. Dynergy will provide an analysis of material financial risks related to present and probable future climate change regulation and legislation, climate change-related litigation, and the physical impacts of climate change, in future Form 10-K filings with the SEC. The company agreed to provide a set of additional climate change disclosures including: current and projected carbon emissions; company strategies for reducing, offsetting, limiting, or otherwise managing emissions; and corporate governance actions, such as linking environmental performance to officer compensation.

Cuomo’s action was prompted by a sense that risks associated with the operations of energy companies – large emitters of GHG gases – are rising as a result of emerging regulatory schemes tied to carbon emissions and climate change at the state and federal level, and that current financial data reporting requirements may not be keeping pace. To ensure that investors continue to receive sufficient information to assess a company’s complete risk profile, Cuomo issued subpoenas to five large energy companies, requesting detailed disclosures on carbon emissions that are expected to flow in future from several planned coal-fired power plants.⁶⁷

⁶⁶ http://www.oag.state.ny.us/media_center/2008/oct/oct23a_08.html. Al Gore was present.

⁶⁷ Proceedings continue with the other three subpoenaed companies: AES Corp. (2007 revenues: \$13.6 billion), Dominion Resources Inc. (2007 revenues: \$15.6 billion), and Peabody Energy Corp. (2007 revenues: \$4.5 billion). www.facet-online.org

California Cap and Trade System

In 2006, California enacted legislation⁶⁸ establishing a program of regulatory and market mechanisms to lower GHG emissions to 1990 levels by 2020. The law directs the California Air Resources Board (CARB) to establish a statewide GHG emissions cap for 2020; to adopt, by January 1, 2009, a plan to cut GHG emissions from significant sources; and to issue regulations to achieve maximum technologically feasible and cost-effective reductions.⁶⁹ After issuing, in June of last year, a draft plan to reduce GHG emissions by 169 million metric tons by 2020 through a cap and trade program, a RPS program for utilities, regulations, and other measures, in December, CARB approved a comprehensive plan to cut statewide GHG emissions circa 30 percent.⁷⁰

CARB Chairman Mary Nichols said: “[The plan] will guide capital investments into energy efficiency to save us money, into renewable energy to break our dependence on oil, and promote a new generation of green jobs for hundreds of thousands of Californians.” Development of a cap and trade program, in concert with WCI, that will cover 85 percent of the state’s emissions, will constitute a chief element of the plan. Other key recommendations include: expanding energy efficiency programs; implementing California's clean cars standards; boosting renewable energy production; and instituting a low-carbon fuel standard. CARB will begin developing detailed strategies to implement the recommended measures that must be in place by 2012.

California Adopts Green Buildings Standards Code

Last July, California adopted the nation’s first statewide green building standards code.⁷¹ The new standards encourage the construction of buildings that use less energy, conserve water, and minimize products containing toxic substances. The standards address sediment and runoff at construction sites, requiring construction sites to limit wastes by reducing them or recycling. California is relying on energy-efficient buildings to help meet the state’s mandate to cut GHG by 20 percent below 2005 levels by 2020. The new standards become mandatory with the state’s 2010 California Building Code. The California Building Industry Association issued a statement welcoming the new code for keeping the state at the forefront of the green building movement while keeping new homes as affordable as possible. The state standards do not prevent local governments from adopting stricter standards.⁷²

⁶⁸ The California Global Warming Solutions Act of 2006 (A.B. 32).

⁶⁹ The law authorizes the Governor to invoke a safety valve in extraordinary circumstances.

⁷⁰ <http://www.arb.ca.gov/newsrel/nr121108.htm>. The Scoping Plan can be viewed at:

<http://www.arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm>.

⁷¹ http://www.bsc.ca.gov/prpsd_stds/default.htm.

⁷² More than 75 cities, counties and local governments, including Los Angeles and San Francisco, have instituted mandatory green building standards in California.

Massachusetts Enacts Climate Change and Energy Packet

Last July, Massachusetts passed three climate change and energy bills to tackle climate change and spur investment in renewable energies and clean technologies. Governor Deval Patrick (D) promptly signed the bills.⁷³ The Global Warming Solutions Act sets statewide caps on GHG emissions.⁷⁴ Relative to 1990 levels, it calls for an 80 percent reduction in GHG emissions by 2050, and a cut up to 25 percent by 2020. Supporters claim the bill would establish the most stringent GHG emission limits in the country. The bill directs the State Secretary of Energy and Environmental Affairs to establish an emissions registry and reporting system to monitor emissions. It prescribes civil fines up to \$25,000 per day for emissions violations.

The Green Communities Act is designed to lower electric bills, promote renewable energy and energy efficiency programs, and curb the use of fossil fuels.⁷⁵ It requires utility companies to purchase energy efficiency improvements that cost less than generating power. This will require utilities to offer incentives to customers to purchase newer, more efficient lighting, air conditioning and industrial equipment, where the incentives cost less than the cost to generate the electricity to power the older, less efficient fixtures and equipment.⁷⁶ To promote renewable energy, utilities are required to sign contracts with renewable energy developers to help clean technology providers obtain financing. Small-scale generators of wind and solar power can sell excess capacity back to the grid (“net-metering”) at favorable rates. The bill eliminates the ban against utility companies owning the solar electric installations they install on customers’ roofs.⁷⁷

The Clean Energy Biofuels Act establishes a low-carbon fuel standard and promotes the development of biofuels.⁷⁸ The act calls for development of a low-carbon fuel standard to lower GHG emissions from the transportation sector by 10 percent. It requires the state to seek agreement with the other RGGI Members to implement the low-carbon fuel standard on a regional basis.⁷⁹ To spur R&D into advanced biofuels, the law exempts non-food-crop biofuels from the state gasoline tax and mandates the inclusion of biofuels in all

⁷³ http://www.mass.gov/?pageID=gov3pressrelease&L=4&L0=Home&L1=Key+Priorities&L2=Job+Creation+%26+Economic+Growth&L3=Clean+Energy+%26+Smart+Growth-Smart+Energy&sid=Agov3&b=pressrelease&f=080813_green_jobs&csid=Agov3.

⁷⁴ The legislation is available at <http://www.mass.gov/legis/bills/senate/185/st02pdf/st02540.pdf>.

⁷⁵ The legislation is available at <http://www.mass.gov/legis/bills/senate/185/st02/st02768.htm>.

⁷⁶ According to the Governor’s Office, efficiency programs have shown savings at 3 cents per kilowatt-hour (kwh) versus 9 cents per kwh to generate power.

⁷⁷ The changes should help to attain the Governor’s goal of installing 250 MW of solar power by 2017.

⁷⁸ The legislation is available at <http://www.mass.gov/legis/bills/house/185/ht04pdf/ht04951.pdf>.

⁷⁹ California was the first state to adopt a low-carbon fuel standard, and is presently developing implementing regulations.

diesel and home-heating fuel sold in the state through minimum-content requirements. Qualifying biofuels must satisfy strict GHG emissions reduction criteria.⁸⁰

Pennsylvania Promotes Alternative Energy and Biofuels

Last year, Pennsylvania Governor Edward Rendell (D) signed into law three bills (Alternative Energy Investment Act; Biofuel Development and Instate Production Incentive Act; and Special Session S.B. 22) that will create an energy fund for investments in alternative and renewable energy projects and provide incentives for the production and use of biofuels. The legislation is part of a broad strategy to create jobs in the energy sector and to reduce the state's reliance on foreign energy sources. The \$650 million energy fund, split between long-term and short-term tranches, will supply loans, grants, and tax credits to encourage investment in alternative energies. The short-term funds will be distributed over eight years to help homeowners and small businesses install energy conservation tools and to provide tax credits for companies that build alternative energy projects. The Biofuel Development and Instate Production Incentive Act requires transportation fuels sold in the state to include increasing amounts of biofuels in relation to instate production levels. The third measure expands an existing alternative fuels grant program to give biodiesel producers a state subsidy of 75 cents a gallon, up to a maximum of \$1.9 million per year per producer.⁸¹

CITY INITIATIVES

New York City's \$2.3 Billion Plan to Cut GHG

Last year, New York Mayor Michael Bloomberg (I) unveiled a \$2.3 billion, nine-year plan⁸² to curb energy consumption and GHG emissions from the City's municipal buildings and operations by 30 percent by 2017, as promised in PlaNYC.⁸³ According to the plan, meeting the 2017 target will require annual reductions of 1.7 million metric tons of CO₂ equivalent (versus 2006 emissions) over the next nine years.⁸⁴ The city plans to shave its annual use of electricity by 220 MW, too.⁸⁵ The city has committed \$900 million, 10

⁸⁰ The Governor's office claims Massachusetts is the first state in the nation to require biofuel content in home heating fuel, and to create a tax incentive for the use of cellulosic biofuels.

⁸¹ The incentive is available for biodiesel produced and sold in PA from July 1. Up to \$5.3 million a year will be available through June 2011. The bill doubles the subsidy to renewable fuels producers to 10 cents a gallon, up to 12.5 million gallons a year.

⁸² *Long-Term Plan to Reduce Energy Consumption and Greenhouse Gas Emissions of Municipal Buildings and Operations*, July 2008. http://www.nyc.gov/html/om/pdf/2008/pr264-08_plan.pdf

⁸³ PlaNYC is the city's environmental strategy, launched on Earth Day 2007. <http://www.nyc.gov/html/planyc2030/html/home/home.shtml>.

⁸⁴ New York City produces 3.8 million metric tons of GHG emissions annually.

⁸⁵ New York City government accounts for 6.5% of total city energy usage and 10% of city peak electricity demand.

percent of its energy budget over the next nine years, to the \$2.3 billion plan. Capital costs will account for \$1.9 billion of the cost; the remaining \$400 million will be allocated to operating expense activities. The City expects to break even on its investment in 2013. By fiscal year 2015 it anticipates it will have saved more on its energy bills than it will have spent on all planned investments (in this area) to that point. Improvements to the city's existing municipal buildings' lighting, refrigeration, ventilation, general operations, and heating and cooling systems, and other capital measures, could contribute 57 percent to the reduction goal. Energy savings at existing wastewater and solid waste treatment plants could contribute 28 percent. Other reductions are expected from purchasing fuel-efficient municipal vehicles and replacing streetlight fixtures with lower-wattage models. The city plans to boost the use of solar panels and cogeneration heating and power systems.

U.S. Conference of Mayors Climate Protection Agreement

The nonpartisan U.S. Conference of Mayors represents U.S. cities with populations of 30,000 or more.⁸⁶ In 2005, Seattle Mayor Greg Nickels (D) launched the U.S. Conference of Mayors Climate Protection Initiative to advance the Kyoto Protocol goals. Today, 850 mayors, representing 80 million citizens, have signed the U.S. Conference of Mayors Climate Protection Agreement.⁸⁷ Participating cities commit to three actions: 1) strive to meet or beat the Kyoto Protocol targets in their communities, 2) urge their state governments, and the federal government, to enact programs to meet or beat the GHG reduction target suggested for the United States in the Kyoto Protocol (7 percent lower than 1990 levels by 2012); and 3) urge Congress to enact national emission trading. In June 2008 the Conference released a 132-city survey⁸⁸ which showed that high gas prices⁸⁹ and the weak overall economy were burdening cities' climate protection efforts. Financial resource constraints were cited in the survey as the largest obstacle to expanding energy efficiency and climate protection initiatives.

⁸⁶ <http://www.usmayors.org/>.

⁸⁷ <http://usmayors.org/climateprotection/documents/mcpAgreement.pdf>.

⁸⁸ <http://usmayors.org/climateprotection/documents/ClimateSurvey.pdf>.

⁸⁹ Nearly nine in 10 of the surveyed mayors said that higher fuel prices are having a "significant" or "very significant" impact on their budgets. To confront rising fuel costs, 38% of respondents have directed city departments to find savings, 26% have allocated cash reserves to fuel costs, 23% have reduced spending in other program areas, and 13% have reduced driving.

U.S. INDUSTRY

Amid calls for a green industrial revolution and a growing body of case studies demonstrating that businesses can earn green (profit) by being “green”, certain sectors of U.S. industry are repositioning to take advantage of opportunities in the climate and energy markets. The shift is marked by pragmatic and strategic considerations. Consumers are calling for environmentally conscious goods and services. Federal- and state-level incentives are boosting economic returns for firms that supply clean energy technologies and renewable energy. Globally, demand for clean energy and climate change solutions is soaring.

U.S. businesses are forming coalitions and joining forces with NGOs to capitalize on these opportunities, and to influence policymakers in Washington and in the fifty state capitals. Industry’s principal concern is to avoid market fragmentation caused by a patchwork of divergent regulations. Complying with one set of regulations at the federal level is preferable to complying with a complex matrix of state laws. The same concern exists with regard to international standards. Forward-thinking U.S. businesses want to be seen as part of the solution, not part of the problem. It should be noted, however, that not all U.S. industries adapt in equal degree to a greener economy. Companies dependent on natural gas are suffering from high fuel prices, as are companies that must contend with elevated energy costs and devalued portfolios due to asset write-downs. Several key developments are outlined below.

Wal-Mart Tightens Performance Standards for Chinese Suppliers

Wal-Mart, the world’s largest retailer (2007 revenues: \$378.8 billion) and the largest corporation in the United States continues to improve its reputation by taking steps to green its operations and those of its suppliers. Late last year, flanked by more than 1,000 suppliers, Chinese government officials and NGO representatives, Wal-Mart announced new stringent performance standards on Chinese suppliers, requiring them to meet quality control standards and to comply with environmental laws.⁹⁰ To place additional pressure on smaller suppliers, which tend to have less developed internal controls, commencing this year, Wal-Mart will furnish the names and addresses of all subcontractors. The “responsible sourcing” guidelines also address energy and sustainability. Wal-Mart will partner with its 200 largest sourcing-factories in China to increase energy efficiency by 20 percent by 2012, and will implement a variety of measures to cut energy use at its existing stores in China by 30 percent by 2010. Over the

⁹⁰ http://www.forbes.com/prnewswire/feeds/prnewswire/2008/10/22/prnewswire200810220000PR_NEWS_USPR_LAW013A.html.
www.facet-online.org

next two years, the company aims to reduce by half the volume of water used by all of its Chinese locations. The stricter product safety and environmental guidelines should facilitate Wal-Mart's goal to virtually eliminate all defective products by 2012.

Institute for 21st Century Energy

In 2007, the U.S. Chamber of Commerce launched the Institute for 21st Century Energy to advise lawmakers on crafting a national energy policy that meets America's growing demand for energy and secures its energy future.⁹¹ In July 2008, the Institute unveiled an "Open Letter" to the next administration and the next Congress, articulating thirteen core principles for securing the nation's energy future.⁹² It followed that in September with a 76-page *Blueprint for Securing America's Energy Future*.⁹³ The "Open Letter" principles call for a broad energy mix – clean coal, fossil fuels, advanced nuclear, renewable energies – and an array of measures to boost energy efficiency. The letter is signed by a number of prominent Americans including: former U.S. Secretaries of State Dr. Henry Kissinger, General Colin Powell, and Dr. George Schultz; former U.S. Senators William Cohen, Sam Nunn and Charles Robb; and former Directors of the Central Intelligence Agency R. James Woolsey and Dr. James Schlesinger. On January 26, Karen Harbert, formerly Executive Director, was named president and CEO of the Institute to replace (retired) General James Jones, who was selected by President Obama to serve as National Security Advisor.⁹⁴

Firms and NGOs Joining Forces

Firms and NGOs are joining forces to call for sensible federal policies that balance environmental objectives with economic considerations. The U.S. Climate Action Partnership (USCAP), launched in 2007, consists of leading businesses and environmental organizations.⁹⁵ USCAP's blueprint for a national climate change policy includes a nationwide emissions trading system. On January 15, USCAP released an updated consensus report (called "A Blueprint for Legislative Action") setting forth a detailed framework for legislation to address climate change. The Pew Center on Global Climate Change⁹⁶ and Environmental Defense Fund⁹⁷ work with business partners to find solutions that work environmentally and economically. Pew Center's Business Environmental

⁹¹ <http://www.energyxxi.org/xxi/staff.htm>.

⁹² http://www.energyxxi.org/xxi/open_letter.html.

⁹³ <http://www.energyxxi.org/NR/rdonlyres/ei5mtsm2czkwt2j5hpsd4rihobhivbv5ai43vl6sjnuuylhjl5c2kpg6klal5kcrdebvsvpdnmafyrqvc4zhbntnu7e/0810blueprint.pdf>.

⁹⁴ <http://view.exacttarget.com/?j=fe8b12767062077a76&m=fee813797d630c&ls=fd515757060027f77117976&l=feb31d747c6d0074&s=fe2010777d660375751077&jb=ffcf14&ju=fe5112737d67037b7c10&r=0>.

⁹⁵ <http://www.us-cap.org/>.

⁹⁶ <http://www.pewclimate.org/>.

⁹⁷ <http://www.edf.org/home.cfm>.

Leadership Council (BELC)⁹⁸ is the largest U.S.-based association of corporations that supports mandatory climate policy. BELC includes 42 mainly Fortune 500 companies with combined revenues of more than \$2 trillion and nearly 4 million employees in total. Through its Center for Environmental Leadership (CELB),⁹⁹ Conservation International¹⁰⁰ cooperates with private sector partners to devise solutions to critical global environmental problems.

Not all industries, however, have the same capability to adapt to, or derive benefit from a transition to a greener economy. Businesses dependent on natural gas, such as chemical producers, fertilizer manufacturers and ammonia plants, are suffering from the high fuel prices.¹⁰¹ Further, not all corporations are moving at the same speed. Some firms and business associations are advocating caution, lest rash action increase the cost of doing business and harm U.S. workers. Last summer, a group of companies and coalitions successfully opposed the Warner-Lieberman cap and trade bill, arguing it would impose excessive costs on U.S. industry. These interests may coalesce again this year to contest climate change legislation.

As U.S. corporations alter their strategies and operations to respond to soaring demand for environmental goods, services and technology, the U.S. “environmental” market will continue to expand. A coming together of policy and robust industry engagement could result in the United States offering tremendous market opportunities in the renewable energy and energy efficiency sectors. The question is whether this can, or will, happen sometime this year, given the myriad difficulties in the financial and capital markets, and the signs of increasing stress in the overall economy, or whether these exciting developments will be postponed to future years.

⁹⁸ http://www.pewclimate.org/companies_leading_the_way_belc.

⁹⁹ <http://www.celb.org/xp/CELB/>.

¹⁰⁰ <http://www.conservation.org/Pages/default.aspx>.

¹⁰¹ Since 1999, the U.S. has reportedly lost more than 40% of its capacity to produce nitrogen fertilizer due to the natural gas price hikes.

CONCLUSION

Under the prevailing market conditions – after reaching historic levels during last summer and early fall, crude oil and U.S. gasoline prices plummeted toward the end of last year, and have not risen much since. At present a barrel for oil costs less than \$42 and a gallon of gas averages under \$2.00 – the near-term prospects for passing federal climate change or broad energy legislation in the United States appear grim but not hopeless. Every day, it seems, brings fresh reports of dramatic corporate losses, write-downs, layoffs and closures. Central government budget deficits are expanding, company cash reserves are dwindling, retirement account values are shrinking. There is extreme volatility in economic markets.

Despite the grave economic situation, President Obama supports efforts to address GHG emissions, and recognizes the need to wean America from oil imports. Already there are promising signs, including President's Obama selections to run EPA, the Department of Energy and the Council of Environmental Quality, as well as the new post created for Carol Browner, that his Administration will assign top priority to climate change legislation and to energy independence. Despite the current preoccupation with the capital markets and the unstable global economic situation, the good news is that there is still a lot of activity taking place in the United States, especially at the sub-national level, regarding climate change, energy and energy efficiency. It can be expected that a significant fraction of these initiatives will continue into next year. Given President Obama's bold statements on ushering in a new, "clean-energy" economy, and with strengthened Democratic majorities in Congress, there is an expectation that America will reassert global leadership on climate and energy. There is a widespread belief that, if America pulls together, it could meet these challenges. In the process, the United States may create tremendous opportunities in the clean technology, renewable energy and energy efficiency markets.

David Campbell (dwcampbell@aya.yale.edu), an attorney and a Certified Public Accountant, is Director of Trade Policy at the Representative of German Industry and Trade (RGIT), the Washington, D.C. liaison office for Germany's two leading business organizations: the Federation of German Industries (Bundesverband der Deutschen Industrie, BDI) and the Association of German Chambers of Industry and Commerce (Deutscher Industrie- und Handelskammertag, DIHK).