

*Regulation of Greenhouse Gases:  
The Management of Uncertainty*

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## **Regulation of Greenhouse Gases: The Management of Uncertainty**

Public awareness and perception of global warming accelerated by carbon emissions is increasingly compelling to lawmakers and regulators around the world. Under the Bush administration, regulatory control within the U.S. lagged behind Europe and much of the world, although it is by far the leading generator of greenhouse gases (GHG).

His presidential campaign made it clear that President Obama sees things differently, and a recent Supreme Court decision gives an Obama led EPA ample authority to regulate GHG. The U.S. will see increasing regulatory and tax policy directed at GHG. The new administration needs to develop regulatory priorities for GHG in the context of desired, but by no means certain, new GHG legislation, and the precarious balance of environmental protection and economic development. It must do this in the context of what appears to be the largest post war recession and many foreign policy challenges. Uncertainty will prevail for some time.

This paper briefly reviews the political, legal, and regulatory developments relating to GHG, and identifies some of the challenges that businesses face with managing the risk inherent with this uncertainty.

### **EPA's Power, and Obama's Stated Willingness to Use It**

The EPA's position on whether GHG are pollutants subject to regulation has evolved under both political and legal pressures. Under the Clinton administration, the EPA determined that it had authority to regulate GHG, but did very little. Under the Bush administration, EPA initially reversed, declaring that GHG are not pollutants subject to regulatory control.

Not surprisingly, the courts became involved, and in 2007 the U.S. Supreme Court made clear that EPA had authority, under present legislation, to control GHG. *Massachusetts v. E.P.A.*, 549 U.S. 497, 127 S.Ct. 1438 (2007).

In *Massachusetts*, the Supreme Court held that the EPA had authority under the Clean Air Act to regulate GHG. Moreover, the Court declared that EPA's past reasons for not regulating GHG were inadequate, and that EPA needed to articulate better reasons, or regulate GHG.

Over a year after the *Massachusetts* ruling, the EPA issued an Advanced Notice of Proposed Rulemaking (ANPR), requesting public comment regarding the extent, if at all, that EPA should regulate GHG. The preface to the ANPR included a statement by EPA Administrator Stephen Johnson that he did not believe current federal law provided an appropriate basis for GHG regulation. He indicated that any GHG program under existing law would likely be "complicated, time-consuming" and "relatively ineffective." The ANPR also took the unusual step of incorporating comments from other federal agencies that generally agreed with the statements in the preface. The ANPR set a comment period of 120 days, thus ensuring that EPA would not actually promulgate any GHG regulations until the start of the new administration.

While current air permit applicants will not have EPA placing carbon dioxide limits in their permits, the EPA under the new administration may have a different interpretation, and may try to use legal and regulatory ways to revise or revoke this interpretive memorandum.

In contrast to the Bush administration, President Obama has made clear that he intends to use the EPA's power to regulate GHG, to the extent Congress is unwilling or unable to pass legislation to address GHG issues. On April 17, 2009, EPA issued a Proposed Finding (PF) that greenhouse gases threaten public health and contribute to climate change. This is another step toward the possible development by EPA of a comprehensive federal GHG program using EPA's power as acknowledged in *Massachusetts*.

In the PF, EPA issued two distinct proposed findings, one for endangerment and another for causing or contributing to climate change, regarding greenhouse gases under section 202(a) of the Clean Air Act:

- That the current and projected concentrations of the mix of six key greenhouse gases—carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF<sub>6</sub>)—in the atmosphere threaten the public health and welfare of current and future generations. This is referred to as the endangerment finding.
- That the combined emissions of CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, and HFCs from new motor vehicles and motor vehicle engines contribute to the atmospheric concentrations of these key greenhouse gases and hence to the threat of climate change. This is referred to as the cause or contribute finding.

EPA stated that neither the PF, nor any final finding, would itself trigger regulation under the entire Clean Air Act. However, the PF is a step toward a comprehensive greenhouse gas regulatory program.

The Obama administration has stated that it would prefer to develop a comprehensive greenhouse gas program based on new legislation from Congress, as opposed to a purely regulatory approach based on the current Clean Air Act. However, the administration has also made clear that it has the power, and the inclination if necessary, to create a regulatory program from existing law, should Congress fail to pass comprehensive greenhouse gas legislation.

Some observers suspect that President Obama may use the threat of sweeping EPA regulation under existing law, based on the authority identified by the Supreme Court in *Massachusetts*, to coerce Congress into specific legislation on GHG and on climate change in general. With Al Franken seated from Minnesota, and with Senator Specter's recent shift to the Democratic Party, the Democratic majority may soon be large enough to pass legislation based on a strict party vote (60 votes are needed in the Senate to end debate and allow passage of

almost all bills). The Obama administration will no doubt reach out to moderate Republicans, and more conservative Democrats, on GHG issues, but those members will also be under the threat, implicit or express, of sweeping EPA regulations on GHG, and the continued development of several different states GHG schemes. Some businesses may prefer a federal GHG program that will impose stricter controls than most state regulatory programs, but that will be uniform across the country, once passed as federal legislation. These businesses may also prefer fairly onerous federal legislation to regulations developed under existing law by an EPA headed by Obama administration political appointees.

The recent passage of a GHG bill by the U.S. House of Representatives shows the challenges that GHG presents, and indicates that a GHG bill from the Senate is still far from certain. A Senate failure would not necessarily prevent GHG regulation; rather such a failure may mean a sweeping program adopted by EPA under current legal authority.

The statements about the desire for bipartisanship notwithstanding, the House bill received virtually no Republican support. Indeed, several Democrats voted against it, mostly from coal producing or consuming states who want to weaken the provisions, but a few who stated it did not go far enough toward reducing GHG.

The bill also divided some well known environmental groups. For example, Greenpeace and Friends of the Earth actively opposed the bill, with the apparent goal of having the EPA develop the GHG program. Other environmental groups actively supported the House bill, and at least one indicated it would not endorse any congress member voting against it, to the dismay of those environmental groups trying to get the GHG program thrown to EPA.

Ongoing consideration of the bill in the Senate will consider many ramifications of the House bill, including its trade provisions. According to an analysis by Congressional Quarterly,

the measure permits the president, beginning in 2020, to impose tariffs on products imported from countries that do not limit greenhouse gas emissions. President Obama has expressed concern about the tariff provision, but such a provision may be needed to get the support of key senators from states that are large coal users, as officials from these states have often been more receptive to trade restrictions based on alleged environmental deficiencies in other countries. Attempts to curtail greenhouse gas emissions may result in a curtailment in international trade.

Senate passage of anything close to the House bill will be very difficult. The rules of the U.S. Senate require 60 votes in order to pass any significant legislation. Several coal state Democrats have expressed concern that coal will be a huge loser in any GHG initiative, and are actively trying to protect their home industries. Industry observers may take this lack of unity as a good sign, that perhaps any GHG initiative will be less extreme because of these coal state Democrats, and other moderate Democrats, on the GHG issue. Such an outcome is certainly possible. However, derailing a congressional GHG initiative may simply play into the hands of the most extreme environmental groups, who hope that the legislative approach will fail, and thus allow EPA to develop the GHG program. The U. S. Supreme Court in *Massachusetts* has already ruled that EPA has such authority under existing law. Derailing a congressional GHG initiative may have massive, negative unintended consequences for those opposed to what the Obama administration will likely propose.

### **State Regulatory Efforts**

Several states have pursued initiatives, either alone or with other states, regarding GHG. The Bush administration did not always view these efforts favorably. In April 2008, the National Highway Traffic Safety Administration announced proposed rules that would preempt ongoing attempts by states to regulate GHG from vehicles. In contrast, the Obama administration has generally supported these state efforts, and the recent letter from EPA

Administrator Jackson, discussed below, is a clear example of EPA actively encouraging states to regulate GHG.

California has taken a particularly aggressive approach to GHG regulation, spawning several court suits, including *Central Valley Chrysler-Jeep v. Witherspoon*, 456 F.Supp.2d 1160 (E.D. Calif. 2006), a case challenging California's ability to impose its own fuel efficiency standards. Also, California has sued the EPA in the U.S. Court of Appeals for the Ninth Circuit, over EPA's refusal to grant a waiver to California and other states to regulate GHG from vehicles. On the issues in these and similar cases, the Obama administration has already taken a different posture from the Bush administration. The new Obama administration has approved, or signaled the desire to approve, these state initiatives in the development of GHG regulations. The new administration's approach will likely change the direction of the current suits on file regarding the state initiatives, and will encourage more states and regions to develop them, at least until Congress and/or the EPA create a national GHG program.

Several Northeast and Mid-Atlantic states have formed the Regional Greenhouse Gas Initiative (RGGI), a cooperative effort to design a regional cap-and-trade program covering carbon dioxide emissions from power plants in the respective states. The states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont are signatory states to the RGGI agreement. These ten states will cap CO<sub>2</sub> emissions from the power sector, and then require a 10 percent reduction in these emissions by 2018. The RGGI states have negotiated a regional CO<sub>2</sub> budget of approximately 188 million tons, and have apportioned it among themselves. RGGI held its first auction in September 2008, and its independent auction monitor characterized the bidding as "robust" and generally "in line with competitive expectations." For more information, see [www.rggi.org](http://www.rggi.org).

Businesses can expect ongoing attempts at GHG regulation at the state level, and support for these efforts by the Obama administration, at least until the federal government, either through new legislation, new EPA regulations, or both, adopts a comprehensive GHG program. Until then, the uncertainty created by multiple state GHG programs will add to the current political demand for a comprehensive federal program.

### **Management of Uncertainty**

Litigation spurred by concerns over GHG, and political developments, contribute to an environment of business uncertainty. For example, a recent EPA Appeals Board ruling rejected the EPA's position that the EPA has no authority to require best available control technology (BACT) for GHG (carbon dioxide) emissions from a coal fired power plant. *In re: Deseret Power Cooperative*, PSD Permit No. PSD-OU-0002-4.00, PSD Appeal No. 07-03. That decision remands the permit application to the agency to determine if BACT should apply to GHG emissions, and for the agency to develop an adequate record for its decision. This ruling, from an appeal in the administrative permitting process brought by the Sierra Club, could indicate a significant change in numerous air quality permits, in which the EPA, or a state agency under delegation of the permitting authority, must either require a certain control technology (such as BACT or maximum available control technology, "MACT") for GHG, or develop a record to explain why the permit need not contain such a requirement.

In response to that appeals board ruling, the past (Bush Administration) Administrator of the EPA, Stephen Johnson, issued an interpretive memorandum supporting the EPA's position that carbon dioxide is not subject to regulation under air permits issued by the EPA, or under permits issued by states with delegated permitting authority. The memorandum, issued December 18, 2008, acknowledged that the regulation at issue was ambiguous, and sought to provide interpretive guidance regarding the EPA's regulation of carbon dioxide. The EPA

administrator acknowledged that carbon dioxide could be considered a pollutant, and in fact the EPA did require monitoring and reporting of carbon dioxide emissions, although the EPA has never required controls of those emissions. However, the memorandum noted that the EPA has never sought to control carbon dioxide emissions, and therefore its regulation requiring BACT of any "regulated" pollutant did not apply to carbon dioxide.

The interpretive memorandum stated that this guidance was necessary, at this time, due to the large number of permits potentially affected by the interpretation of this regulation. However, environmental groups will certainly claim that issuance of this memorandum is a last minute attempt by the current the EPA to limit the ability of the EPA under an Obama administration to regulate greenhouse gases. The new EPA has already signaled that it may view the issue differently.

In January 2009, the Sierra Club submitted to EPA an amended petition for reconsideration of the interpretative memorandum. In a February 17, 2009 letter to the Sierra Club, the new EPA Administrator, Lisa Jackson, granted the petition for reconsideration, "to allow for public comment on the issues raised in the memorandum." The letter stated that EPA would not stay the effectiveness of the interpretative memorandum for the time being, but noted that other permitting authorities "should not assume that the interpretative memorandum is the final word on the appropriate interpretation of Clean Air Act requirements." The letter also reminded those states that issue permits under their own State Implementation Plans that the interpretative memorandum is not binding on that permitting authority.

This letter signals that the new EPA will re-evaluate the appropriateness of including carbon dioxide among the regulated pollutants requiring BACT in new PSD permits. It also

signals that EPA will not stop individual states from including carbon dioxide among the pollutants in a state permit, issued under a State Implementation Plan.

The Obama administration has stated a desire to have, via legislation or regulation, a comprehensive GHG program at the federal level, and this letter is a step toward a comprehensive GHG program from EPA. The letter is also consistent with the Obama administration's stated willingness to allow much freedom for individual states to enact GHG restrictions, at least until development of a comprehensive federal GHG program.

The political, legislative and regulatory climate, at the federal level and in many states, is so uncertain regarding GHG as to make even relatively short term planning a challenge. High energy prices encouraged conservation, but recent drops in those prices, no doubt due to the recession, make those plans uncertain, as well.

Renewable energy sources, such as wind, are yet another potential partial solution receiving considerable attention. Wind farms, however, present their own controversy largely as a result of the "not in my backyard" attitude prevalent in the country. Opponents argue that wind farms destroy the natural beauty of the landscape, negatively affect adjacent real estate values, and threaten wildlife. Residents of various states, including Massachusetts and Texas, have raised these arguments in opposing wind farm developments through litigation. Thus far, courts have generally permitted projects to continue, but much more aggressive state and federal support is necessary before wind contributes significantly to the energy mix.

Uncertainty creates risk. Capital investment and enterprise follows promised return and growth. In the prevailing environment, however, it is increasingly difficult to assess where, how or how much capital to invest in businesses generating GHG or dependent upon such industries.

A good example is the acquisition of significant carbon emitting assets or companies. Additional GHG limits will be coming, but how much, and when, are still uncertain. Due to the recent downturn in the economy, many American companies may look like good acquisition targets. However, valuing those assets at this time is fraught with risk. The GHG initiative that is now unknown, but that will eventually be in place, may significantly alter the value of these assets, and probably lower that value. Quantifying that downside at this time, with all of the legislative and regulatory uncertainties, will be very difficult, but the uncertainty will certainly raise the discount rate associated with acquiring the assets.

These developments and trends illustrate that affected industries must aggressively manage their businesses to hedge the risk of developing regulation while simultaneously positioning their business to be competitive. It is no longer sufficient just to know your business and the market, or the existing regulatory landscape where your business operates. Instead, it is becoming increasingly important to read the tea leaves and foretell what the litigation and political future will bring. In order to do that, industries will need to increase their awareness of public attitudes and the trends in legislation, regulation, and litigation, and become even more proactive in bringing good business and engineering sense to the issue of GHG.

## **BIOGRAPHIES**

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## **POTENTIAL GHG MEASURES MAY PUT COAL AND GAS INTERESTS IN CONFLICT**

Several provisions in the greenhouse gas (GHG) Bill passed by the United States House of Representatives, along with possible amendments from the United States Senate, indicate a desire and expectation for increased coal usage, based on carbon capture and sequestration (CCS) technology. Basically, CCS technology involves eliminating carbon dioxide emissions from burning coal, and storing or sequestering those emissions below ground, thus eliminating their escape to the atmosphere.

Coal producing and coal consumption interests are very interested in encouraging this approach; however, CCS technology is not proved at this time.

The issues regarding CCS have technical, political, and international ramifications, and may put coal interests in conflict with natural gas interests. First, the natural gas industry representatives point out that CCS, an untested and unproved technology, may not provide the advantages toward limiting GHG that the coal industry claims or that coal state politicians desire. In contrast, the relatively small carbon component from burning natural gas is scientifically without question, and natural gas represents a largely domestic resource that can add to domestic energy security as well as to limiting GHG emissions. Thus, many natural gas industry advocates suggest that energy legislation should do more to encourage natural gas development, and not pin hopes on coal using the unproved CCS technology.

The domestic political issues generally revolve around geography and party affiliation. Several large eastern coal producing and consuming states, such as Pennsylvania, Virginia, West Virginia and Ohio, include many Democratic senators who will play important roles regarding final GHG legislation. In contrast, many of the significant natural gas producing states have only Republican senators who, to date, do not appear to be significantly involved in negotiating the Senate's GHG legislation. Also, many western coal producing states are also significant natural gas producers. It appears that, for those senators who will actually be involved in negotiating a GHG Senate Bill, the importance of coal may be significantly greater than natural gas.

A further complication involves international relations. Global warming, by definition, is an international issue, and steps to lower total GHG emissions will require steps taken internationally, and particularly in China. Coal appears to be the dominant source to meet China's future energy requirements. Natural gas and other sources will probably play a much smaller role in the expected huge increases in China's energy consumption, which will accompany the expected rapid growth of the Chinese economy. Coal producers argue that encouraging a CCS oriented approach will force the development of CCS technology, which can play an important role in limiting GHG emissions not just in the United States, but internationally, and especially in China. Of course, natural gas producers point out that, while CCS could theoretically enhance the appropriateness of coal internationally, this is still an unproved technology, and the theoretical advantages in China do not change the state of the science.

While natural gas producers can point to the clear current advantage of natural gas in its significantly lower GHG emissions per unit of energy, domestic and international political forces may encourage legislation that will favor coal and attempt to force development of CCS technology, in a way that many natural gas producers will view as unfair.

For further information on the history, status and potential impact of greenhouse gas legislation see (insert link to updated GHG article by James Smith from October publication)