EDWARDS ANGELL PALMER & DODGE LLP

111 Huntington Avenue Boston, MA 02199 617.239.0100 *fax* 617.227.4420 eapdlaw.com

Reducing CO_2 via Cap-and-Trade

by

Albert L. Sokol & Matthew E. Smith

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With the adoption of the Kyoto Protocol in 1997, major countries around the world formally recognized the need to limit carbon dioxide ("CO_2") and other Greenhouse gas ("GHG") emissions.[i] Now that there is scientific consensus about global warming and the need to reduce GHGs, debate has increasingly focused on concrete measures to achieve this goal, with many countries and regions within the United States having already implemented some version of a cap-and-trade system. Such systems constitute a "carrot," harnessing the natural incentives of private companies to buy and sell, in contrast to a system that merely uses a "stick" to punish non-compliant companies. This article describes cap-and-trade systems generally and the related offset allowance component and briefly explores the rapidly evolving climate change legislation emerging in Washington, D.C. With one bill passed in the U.S. House of Representatives in June of 2009 and various Senate bills having been drafted and proposed, it has become increasingly difficult to predict what a successful climate change bill will look like, not to mention, if and when such a bill would pass.

Cap-and-Trade Systems Generally

Under a cap-and-trade system, a governing body establishes a maximum amount of allowed GHG emissions, also known as allowances, and divides that allowance figure among the various regulated emissions "sources" (e.g., a manufacturing facility, power plant, or other carbon-intensive emitter). Rather than regulate companies per se, cap-and-trade systems use economic incentives to regulate the physical sources of GHG pollution. Typically, each allowance represents the right of a regulated source to emit a specified amount of GHG free of governmental penalty. Such allowances can be distributed to the regulated sources either free of charge or upon payment (e.g. via auction). Over time, fewer and fewer allowances are issued each year, thereby incentivizing regulated entities to reduce emissions. Sources that emit pollutants in excess of their allowance allocation are subject to penalties, such as monetary fines, denial of credits for offset projects, and/or forfeiture of future allowances. Sources that emit less than their allowances may typically bank the allowances for future use or sell them to interested buyers on a secondary market. By creating a system in which allowances can either be used or sold, allowance holders are incentivized to reduce their GHG emissions.[ii] Examples of cap/trade systems in the U.S. and elsewhere are (i) the European Union Emissions Trading Scheme (EU ETS)[iii], which is a codification of the cap and trade program established under the Kyoto Protocol, a treaty which binds most developed nations with the exception of the United States, (ii) the Regional Greenhouse Gas Initiative (RGGI), which is a mandatory emissions reduction program that governs certain fossil fuel based utilities in 10 states across the Northeast and Mid Atlantic[iv], and (iii) the Chicago Climate Exchange (CCX)[v], which is a voluntary but legally binding GHG reduction and trading system with over 350 members that range from large corporations to states and municipalities.

The Offset System

Some cap-and-trade systems also permit the issuance of additional allowances, known as

offsets. Offsets can originate from any number of emissions reduction projects outside of the capped sectors. These projects are required to follow numerous monitoring and validation practices to ensure that the GHG emissions being either reduced, avoided, or sequestered, are actual and quantifiable. Hence, if a cap and trade system's governing body verifies an offset project's emissions reductions, offset allowances would be issued to the project owner in proportion to the GHG emissions reduced, avoided, or sequestered. The project owner could then sell such offset credits either directly to the regulated sources or to other carbon brokers on the secondary market, who would eventually sell to the end buyer (the regulated sources).

Regardless of the particular GHG that an offset project avoids, reduces, or sequesters, all regulated GHG emissions are quantified by a standardized unit known as the Carbon Dioxide Equivalent (the "CO_2e"). One CO_2e represents the global warming potential of one ton of CO_2 emissions over a one hundred year period. This standardized unit of measurement allows parties to more easily evaluate the effect of emissions reduction projects on global warming. Typically, a set number of offset credits would be granted for every one CO_2e reduced, avoided, or sequestered (usually a one-to-one ratio).[vi]

The quality and validity of an offset credit may be evaluated by attributes such as permanence, additionality, leakage, and other standards.[vii] For example, "additionality" centers on whether the emission reductions would have occurred if tradable offsets were not available, i.e. they would not have occurred in a "business-as-usual" scenario.[viii] This can be difficult to evaluate for many prospective developers of offset emissions reduction projects.

U.S. Carbon Emissions Legislation

The Waxman-Markey Bill

Although there is growing opposition to cap and trade legislation in the United States, Congress has taken substantial steps towards implementing a comprehensive system. Representatives Ed Markey (MA-Dem.) and Henry Waxman (CA-Dem.) spearheaded the initial effort in the House by introducing broad legislation in late March 2009, known as "The American Clean Energy and Security Act of 2009". The House passed a revised version of the legislation on June 26, 2009, by a mere seven vote margin ("ACES").[ix]

ACES would establish, among other things, a market-based cap-and-trade system under which allowances are allocated, either freely or by auction, to utilities, refiners, and numerous other emission sources whose GHG emissions exceed the 25,000 ton threshold (collectively, the "Covered Entities"). Initially, under ACES, 85% of the allowances would be freely distributed to the Covered Entities, while the remaining 15% would be auctioned off quarterly each year. The proceeds of these auctions would be used by the federal government to assist low income consumers with the cost of their utility bills. Under ACES, the number of allowances either handed out or auctioned would be incrementally reduced over time in order to meet the following GHG emissions reduction targets:

3% below 2005 levels by 2012,

17% below 2005 levels by 2020,

42% below 2005 levels by 2030, and

83% below 2005 levels by 2050.

ACES would allow Covered Entities to use both domestic and international offset credits in lieu of allowances to meet a limited portion of their compliance requirements. A number of the specifics relating to the offset system are missing from ACES. The bill requires that the bulk of the regulations governing offsets be established by the Administrator (as defined in ACES) in consultation with appropriate federal agencies not later than two years after the enactment of the bill. Many believe that there will be an initial shortfall of domestic offset credits in the early years, but it remains to be seen exactly how much demand there will be for

such offset credits. ACES would also permit unlimited banking of allowances (either purchased or freely allocated) for use in future years. Finally, ACES also contains the directive for the government to establish a "Strategic Reserve", which could be used to help regulate supply issues and protect against rapid increases in allowances prices.

The Kerry-Boxer Bill

On September 30, 2009, Senators Kerry and Boxer introduced the Clean Energy Jobs and American Power Act of 2009 (the "Senate Bill"). The Senate Bill contains many of the same structural components as ACES but differs in the following ways: (1) there is no Renewable Electricity Standard ("RES") included in the bill, as the RES was already passed through Senator Bingaman's Energy and Natural Resources Committee and will likely be merged with the comprehensive bill when it comes to the floor sometime in 2010; (2) the Senate Bill commits to a 20% reduction of 2005 GHG emissions by 2020 as compared to a 17% commitment in ACES; (3) the offset allowances are limited annually to two billion, one and one-half billion of which is allowed to come from domestic offsets and five hundred million from international offsets (ACES also limits the total annual offset amount to two billion but divides the allocation between domestic and international 50/50); (4) the amount of allowances freely allocated to capped industries was reduced from 85% in ACES to 75%; (5) there are price protection mechanisms in the form of a "price collar", which is essentially a floor and ceiling price for auctioned allowances; (6) there are provisions that support the advancement of nuclear power technologies, an area missing from ACES; and (7) there are provisions supporting the advancement of "clean coal" technology such as carbon capture and storage of coal burning emissions (more accurately called "clean*er* coal" technology).

In November and December of 2009, several alternative draft bills, namely the Stabenow Bill, the Cantwell-Collins Bill, and a bill "framework" drafted by Senators Kerry, Lieberman, and Graham, were proposed in the Senate. These new proposals support the view that neither ACES nor the Senate Bill would pass into law without substantial concessions. The Stabenow Bill broadly expands upon the offset provisions of the Senate Bill but excludes some of the rigorous scientific, environmental, and social standards that were found in both ACES and in the Senate Bill. The Cantwell-Collins Bill proposes, among other things, to exclude banks, brokers, and related financial parties from participating in the allowance auction process, thereby restricting the market-based approach found in ACES and in the Senate Bill. The Kerry-Lieberman-Graham Framework includes support for off-shore drilling as well as substantially greater incentives for nuclear power, both of which are an attempt to find middle ground in what has been a divisive Senate debate.

Recent Domestic and International Developments

The past two months have proved to be a traumatic time for the climate change movement both internationally and in the United States. The COP15 United Nations Climate Change Conference in Copenhagen began with modest but hopeful expectations of reaching some international agreement, as more countries than ever before came to the table to discuss the critical issue of climate change in light of the pending expiration of the Kyoto Protocol in 2012. However, those expectations quickly fell apart due to the strong concerns raised by several developing nations. In the final hours, however, a document, known as the Copenhagen Accord, was drafted and signed by the United States, China, India, Brazil, and South Africa. The Accord's two main goals are: (1) prevent global temperatures from increasing by more than two degrees Celsius from pre-industrial levels, and (2) for developed countries to jointly raise approximately $100 billion a year by 2020 to address the needs of developing nations. While the Accord is essentially a non-binding political document, countries have been given until January 31, 2010 to sign the Accord and set forth their own respective emissions reduction targets.

The failure to achieve a binding and broad based agreement in Copenhagen, coupled with the enormous political capital already spent on Congress's lengthy healthcare negotiations, will make it difficult for Congress to pass a comprehensive climate change bill in 2010. In the coming months additional legislative items may also overtake the climate bill, e.g. domestic infrastructure funding and banking and finance reform. Further, many interest groups, especially those in the utility sector and the petroleum refining sectors, have increased their efforts to impede the progress of a cap and trade bill. The recent United States Supreme Court decision in *Citizens United v. Federal Election Commission*, 2010 WL 183856 (U.S. 2010), which struck down key elements of the of the McCain-Feingold campaign finance reform laws, will likely allow these same corporate interests to exert even more influence in their opposition to cap and trade. However, with opposition growing and additional hurdles mounting, President Obama, in his first state of the union address on Wednesday, urged Congress to "advance" work on climate and pass a comprehensive energy bill in 2010. Nonetheless, in the event a comprehensive cap and trade bill is not passed this year, we will likely see the Environmental Protection Agency (EPA) continue to move forward in its implementation of carbon emissions regulation in lieu of federal legislation.[x]

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[i] The six GHGs regulated by the Kyoto Protocol are: Carbon dioxide (CO_2), Methane (CH_4), Nitrous oxide (N_2O), Sulphur hexafluoride (SF_6), Hydrofluorocarbons (HFCs), and Perfluorocarbons (PFCs).

[ii] Additional information on cap-and-trade can be found at the EPA's website. See http://www.epa.gov/captrade/ captrade-101.html.

[iii] *See* http://www.rggi.org/home for more details.

[iv] *See* http://www.rggi.org/home for more details.

[v] *See* http://www.chicagoclimatex.com for more details.

[vi] ACES requires one offset credit to replace one required emissions allowance. *See* Title VII, Part C, Section 737(b) of ACES.

[vii] *See* http://www.nature.org/initiatives/climatechange/activities/art24031.html.

[viii] *See* http://www.tufts.edu/tie/carbonoffsets/carbonquality.htm#additionality.

[ix] For the full text of ACES *see* http://energycommerce.house.gov/Press_111/20090701/hr2454_house.pdf.

[x] In its long awaited response to the United States Supreme Court's holding in *Massachusetts v. E.P.A*, 549 U.S. 497 (2007), the EPA issued a formal report which provided that CO_2 is a threat to public health and welfare. On April 13, 2009, the EPA's "Endangerment Finding" cleared the White House's review process, thereby giving the Obama administration a Supreme Court-sanctioned backup plan to instituting a carbon regulation system in the event that the currently proposed legislation stalls or fails to be passed in Congress. The EPA continues to push ahead in lieu of a federal law, which would supersede EPA regulation.