CARBON EMISSIONS TRADING IN THE UNITED STATES

1. INTRODUCTION

The United States has had decades of experience in emissions trading. This experience includes permit trading programs implemented by the U.S. Environmental Protection Agency (“EPA”) in the 1970’s for regional pollutants, permit trading programs for lead and chlorofluorocarbons in the 1980s and an allowance trading program for sulphur dioxide under Title IV of the Clean Air Act amendments of 1990. In addition, renewable energy certificates (“RECs”) which represent the environmental attributes of power generated from renewable sources are traded in a number of national, regional and state-based markets.

Emissions trading in the carbon area is less developed in the United States primarily due to the United States’ withdrawal from the Kyoto Protocol in 2001. Nevertheless, several regional carbon trading programs are being currently developed. There are also a number of federal bills currently pending before Congress that would, if passed, impose a federal cap and trade system for carbon emissions trading. A strong voluntary carbon market has also developed in the United States. The following article provides a brief overview of the major carbon emissions trading programs currently being proposed or developed in the United States on both a federal and state level.

2. FEDERAL-LEVEL CARBON EMISSIONS TRADING SCHEMES

(a) Carbon Emissions Trading Programs under the Clean Air Act

The authority of the EPA to regulate carbon emissions has been the subject of recent litigation in the United States. Initially, the EPA took the position that the Clean Air Act did not grant it authority to regulate greenhouse gases (“GHGs”). It further stated that, even if it did have authority to regulate GHGs, such regulation should be postponed until more is known about the health and environmental consequences. Several states, led by Massachusetts, took the EPA to court arguing that the EPA misinterpreted the law and that scientific evidence made it clear that global warming has harmful

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2 http://www.mwe.com/index.cfm/fuseaction/publications.nldetail/object_id/7678e13d-0b3c-403e-94c9-ef6b34f7954c.cfm
effects. The EPA won at the U.S. Court of Appeals for the District of Columbia, but in April 2007, the United States Supreme Court, in a 5-4 decision in Commonwealth of Massachusetts v. EPA ("Massachusetts"), held that the EPA has the power to regulate GHG for new motor vehicles that emit carbon.\(^3\)

The Supreme Court, in reversing the Court of Appeals decision, stated that the text of the Clean Air Act is unambiguous and that the definition of air pollutants includes airborne compounds. They also found that the harm associated with climate change are serious and well recognized and, given the EPA’s failure to dispute the existence of a causal connection between man-made GHG emissions and global warming, its refusal to regulate such emissions, at a minimum contributed to Massachusetts injuries. The Supreme Court also held that, because GHGs fit within the Clean Air Act’s “capacious” definition of “air pollutant”, the EPA has the statutory authority to regulate emissions of such gases from new motor vehicles. Further, the Supreme Court held that under the Clean Air Act, the EPA can avoid regulating GHGs only if it determines that GHG’s do not contribute to climate change or if it provides a reasonable explanation as to why it cannot or will not exercise its discretion to determine whether to do so. The EPA’s action in declining to regulate carbon was characterized by the Supreme Court as “arbitrary, capricious, or otherwise not in accordance with law”.

This recent decision has the potential to impact the regulation of GHG emissions in the United States. Although the Supreme Court’s ruling in Commonwealth will not necessarily force the EPA to regulate the carbon emissions from automobiles, the EPA must at least establish an administrative record on carbon. The Massachusetts’ decision demonstrates recognition at the highest judicial level in the United States of the role of GHG emissions in climate change.\(^4\)

\(^3\) http://www.supremecourtus.gov/opinions/06pdf/05-1120.pdf

\(^4\) Lora Lucero, "Massachusetts v. EPA – The USA Supreme Court Confronts Climate Change" http://www.abanet.org/statelocal/lawnews/summer07/mass.html

(b) Federal Cap-and-Trade Bills\(^5\)

Members of the 110th Congress had introduced more than 125 bills, resolutions, and amendments specifically addressing global climate change and GHG emissions by June 2007. Included in these bills are a number of cap-and-trade bills several of which are summarized below.\(^6\)

The Climate Stewardship Act introduced by John Olver establishes a market-driven system of tradable GHG allowances, administered by the EPA, to begin in 2012. The bill establishes a national GHG database and registry, as well as the Climate Change Credit Corporation. This non-profit corporation with a President appointed board would be allocated a portion of tradable allowances and would be able to buy and sell other allowances. The Climate Change Credit Corporation would be required to use the proceeds from its trading activities to reduce costs borne by consumers as a result of the GHG reduction requirements of the Act.

The Climate Stewardship and Innovation Act of 2007, introduced by Senators Lieberman and McCain establishes a market-driven system of tradable GHG allowances, administered by the EPA, to begin in 2012. The Act would divide the economy into sectors—electricity, transportation, industry, and commercial—with each subject to a separate, sector-wide emissions caps, while allowing inter-sector trading. The bill establishes a national GHG database and registry, as well as a Climate Change Credit Corporation, a non-profit corporation with a board appointed by the President which would be allocated a portion of tradable allowances, and be able to buy and sell other allowances.

Since the writing of this article the Climate Security Act, introduced in October 18, 2007 by Senators Lieberman and Warner, has become the focus of congressional attention on climate change. It amalgamates elements of previous bills and calls for emission caps to be made more restrictive each year from 2012 to 2050. Its goal is to reduce emissions 70% over 2005 levels by 2050.

\(^5\) http://www.pewclimate.org/what_s_being_done/in_the_congress/110thcongress.cfm

\(^6\)
The Global Warming Pollution Reduction Act, introduced by Senators Sanders and Leahy amends the Clean Air Act and requires the United States to reduce its GHG emissions by targeted levels and gives the Administrator of the EPA the discretion to propose GHG reductions, and provides a menu of policy options, including market-based measures—such as emissions trading — to achieve those reductions.

The Electric Utility Cap-and-Trade Act of 2007, introduced by Senators Feinstein and Carper creates a GHG cap-and-trade system for electric generating facilities of 25 megawatt capacity and above. Emission credits would be distributed both by auctions and allocations, with auction proceeds going into a Climate Action Trust Fund. Monies from the Trust Fund would be used to fund research and development for climate-friendly technologies and to fund worker adaptation programs.

The Global Warming Reduction Act of 2007, introduced by Senators Kerry and Snowe establishes an economy-wide global warming pollution emission cap-and-trade program. The bill directs the EPA Administrator to design a cap-and-trade program, and gives the Administrator discretion over the scope of the program, including which sectors would be subject to the cap.

The Safe Climate Act of 2007, introduced by Representative Waxman on March 21, 2007, would reduce emissions to 80% below 1990 levels by 2050. It would do so in a manner similar to the Global Warming Reduction Act before the Senate.

The Clean Air Planning Act of 2007 introduced by Senator Carper, sets out annual national pollutant tonnage limits and emissions trading programs for pollutants including CO₂. In addition, it establishes the Climate Action Trust Fund, funded by revenues from trading program auctions to be used for clean technology research and development, adaptation assistance for workers, and wildlife and habitat conservation and adaptation.

The Clean Air/Climate Change Act of 2007 introduced by Senators Alexander and Lieberman would amend the Clean Air Act to establish a regulatory program for pollutants and GHG emissions from the electricity generating sector and requires the EPA Administrator to establish carbon dioxide and nitrogen oxide allowance trading programs for generating units. The bill also authorizes the Administrator to award offset allowances for certain offset projects, and provides guidelines for awarding such offsets.

The Clean Power Act of 2007, introduced by Senator Sanders amends the Clean Air Act to reduce emissions from electric power plants. Caps would be placed on GHG emissions if the President has not signed legislation affecting at least 85% of GHG emissions by December 31, 2012. The bill also directs the Administrator to establish an emissions allowance permitting and trading system.

The Low Carbon Economy Act, introduced by Senators Bingaman and Specter establishes a cap-and-trade system for GHG emissions to begin in 2012 for certain facilities. The facilities would include petroleum refineries, natural gas processing plants and liquefied natural gas facilities, importers of liquid fossil fuels, importers and manufacturers of non-carbon dioxide GHGs, large coal-consuming facilities, manufacturers of nitric acid, and aluminium smelters. The bill establishes a technology accelerator payment ("TAP"), which regulated entities can pay in lieu of submitting an emission allowance. Funds received under the TAP mechanism will be used to fund technology development and deployment. Emission allowances will be allocated to industry sectors: 12% to coal mines; 7% to petroleum refineries; 4% to natural gas processing facilities; 54% to electricity generating facilities; 4% to non-fuel regulated activities; and 19% to carbon-intensive manufacturing facilities. Nine per cent of allowances will be allocated to states, and allowances will also be allocated for agricultural projects and early reductions.

The Containing and Managing Climate Change Costs Efficiently Act was introduced by Senator Mary Landrieu and establishes the Carbon Market Efficiency Board, supervised by the Department of Treasury, to promote the achievement of the U.S. environmental objectives including any national mandatory GHG emissions cap and reduction targets. This bill is intended to serve as a cost containment amendment for any GHG cap-and-trade bill brought to the full Senate.
3. STATE-LEVEL CARBON EMISSIONS TRADING SCHEMES

(a) Regional Greenhouse Gas Initiative (“RGGI”)
In December 2005, a number of Northeastern states signed a memorandum of understanding whereby they committed to implement a mandatory market-based cap and trade program designed to reduce carbon dioxide emissions from Northeastern power plants sized at 25 megawatts and above. Participants in RGGI currently include Connecticut, Delaware, Maine, New Hampshire, Massachusetts, New Jersey, New York, Rhode Island, Maryland and Vermont (“RGGI States”). The District of Columbia, Pennsylvania, and the provinces of Ontario, Quebec and New Brunswick are observers. RGGI will initially be aimed at developing a program to reduce CO$_2$ emissions from power plants but will be expanded to other kinds of sources and include the participation of other states. For example, in October of 2006, Governors Schwarzenegger and Pataki announced plans to link emissions trading between carbon markets being developed for California and the states participating in the RGGI.

RGGI will be the first mandatory program of its kind in the United States with the first compliance period for power plants commencing in 2009 and with regional caps of 121 million tons of CO$_2$ annually until 2015. RGGI is expected to continue until at least 2019. The first RGGI compliance period runs for three years. Compliance with the emission caps will be enforced by state environmental agencies. Within the regional cap, each state will be assigned an initial base annual CO$_2$ Budget Trading Program budget.

Once the RGGI States have their respective CO$_2$ caps in place, each State must set aside 25% of their RGGI allowances for their “general consumer or strategic energy purpose account”. The remaining RGGI allowances are then allocated among the emitting power sources, with one RGGI allowance permitting the affected source to emit one ton of CO$_2$ emissions. Emitters that do not have sufficient RGGI allowances will be required to purchase them on the market. Sources with excess RGGI allowances may sell such allowances to other emitters or bank them for future use.

In addition to allowances, emitters can meet their target by using offset credits. Offset credits are created when emission reductions occur outside of the capped power sector. RGGI only allows for limited forms of GHG reduction programs. Offsets may be issued to verify reduction projects anywhere within the United States that reduce CO$_2$ (or CO$_2$ equivalents) emissions via (i) landfill methane standards; (ii) sulphur hexafluoride emissions reductions; (iii) CO$_2$ sequestration through afforestation; (iv) increase in fossil fuel energy efficiency; (v) methane capture via agricultural practices; and (vi) capture of fugitive emissions from natural gas distribution facilities. Offsets from non-participating states may be awarded one short ton credit for every two short tons of verified reductions.

(b) California – Global Warming Solutions Act 2006 (“AB 32”)
California’s new Global Warming Solutions Act of 2006 focuses exclusively on GHGs and establishes a framework for some of the most significant controls on GHG emitters in North America. The legislation requires the California Air Resources Board (“CARB”) to establish state GHG emission caps of 1990 levels by 2020 and to require reporting of emissions by January 1, 2008 to facilitate the management of emission reductions programs (including market-based mechanisms). AB 32 represents the first enforceable state-wide program in the U.S. to cap all GHG emissions from major industries and includes penalties for non-compliance.

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7 http://www.rggi.org/
compliance. AB 32 authorizes, but does not mandate, the implementation of a market-based mechanism to meet these targets.\textsuperscript{10}

Under AB 32, all entities (“GHG Sources”) whose emissions “are at a level of significance” will be required to reduce, limit and/or report their GHG emissions. GHG Sources emissions will be deemed to be at “a level of significance” if that entity’s participation in the mandated emission reduction program would enable CARB to effectively reduce GHGs. These would include each State’s largest industrial participants, such as cement plants, oil refineries and utilities, and may extend to other sectors.

AB 32 authorizes CARB to adopt market-based mechanisms to be used by affected sources to meet compliance measures. Such market-based mechanisms include GHG emission exchanges, banking, credits and other transactions. The instruments to be traded on any future exchange would be measured using carbon dioxide equivalents (“CO\textsubscript{2}eq”), as established by the United Nations Intergovernmental Panel on Climate Change (“IPCC”).

By January 1, 2008, regulations requiring the reporting and verification of GHGs will be enacted and, following consultations, the State will establish the state-wide levels of GHG emissions in 1990 to aid in setting the 2020 target. By the beginning of 2009, CARB also intends to have a formal plan, which will contain recommendations on direct emission reduction measures, alternative compliance mechanisms, market based compliance mechanisms, and monetary and non monetary incentives. As of January 1, 2010, GHG Sources may implement early action reduction measures and receive credit for them in 2012, when GHG emission limits will be in place. The GHG emissions limits are slated to take effect on January 1, 2012, when any approved market based mechanisms will also become operative.

Governor Schwarzenegger formed the Market Advisory Committee (“MAC”) to design a cap and trade system for California. On June 29, 2007, MAC released its final report and recommendations for the design of a GHG cap and trade system in the state, should CARB decide to implement a market-based system.\textsuperscript{11} MAC recommendations for the system include the following:

- Eventually incorporating all major GHG-emitting sectors of the economy into the cap-and-trade program.
- Taking a first-seller approach to capping emissions associated with electricity whereby the entity that first sells electricity in the state is responsible for compliance.
- Using a combined approach of free allocation and auctioning of allowances.
- Allowing offsets, both within and outside state borders, in a cap-and-trade program.
- Providing linkage opportunities for a California cap-and-trade program with similar policy initiatives in other jurisdictions.

(c) California – Climate Action Registry

The California Climate Action Registry was established by California as a non-profit voluntary registry for GHG emissions.\textsuperscript{12} The purpose of the Registry is to help companies and organizations to establish GHG emissions baselines against which any future GHG emission reduction requirements may be applied. Participants who use 1990 as a base year can record their GHG emissions. Participants include businesses, non-profit organizations, municipalities, state agencies and other entities.

The Registry requires the reporting of only CO\textsubscript{2} emissions for the first three years of participation, although participants are encouraged to report the remaining five GHGs covered in the Kyoto Protocol (CH\textsubscript{4}, N\textsubscript{2}O, HFCs, PFCs, and SF\textsubscript{6}). The reporting of all six gases is required after three years of Registry participation. The Registry has developed a General Protocol and additional industry-specific protocols which give guidance on how to inventory GHG emissions for participation in the Registry: what to measure, how to measure, the back-up data required, and

\textsuperscript{10} http://www.pewclimate.org/what_s_being_done/in_the_states/ab32/

\textsuperscript{11} http://www.climatechange.ca.gov/policies/market_advisory.html

\textsuperscript{12} http://www.climateregistry.org/
certification requirements. When organizations become participants, they agree to register their GHG emissions for all operations in California, and are encouraged to report nationwide. The Registry requires the inclusion of all direct GHG emissions, along with indirect GHG emissions from electricity use.

**[d] California – Other Climate Change Initiatives**

On July 31, 2006 Governor Schwarzenegger and then British Prime Minister Tony Blair signed an agreement that included a commitment to evaluate and implement market-based mechanisms that spur innovation. The United Kingdom will share best practices on emissions trading and lessons learned in Europe. California and the United Kingdom will also explore the potential for linkages between market-based mechanisms that will better enable the carbon markets to accelerate the transition to a low carbon economy.13

On May 30, 2007 Governor Schwarzenegger and Ontario’s Premier McGuinty signed a Memorandum of Understanding on climate change in which, they agreed to work together on national, North American and international emissions trading and to explore market-based mechanisms like the Western Climate Initiative.14

On December 14, 2006 Governor Schwarzenegger and Manitoba Premier Gary Doer announced a five-year agreement – “Explore Linking of Future Carbon trading Markets and Reduce Global Gas Emissions” which includes an agreement to explore credit trading opportunities between Manitoba and California via CARB and the California Climate Action Registry, especially on offset credit trading protocols for livestock management.15

**[e] Western Climate Initiative**

The Western Climate Initiative (“WCI”) was formed in February 2007.16 Current members include Arizona, California, New Mexico, Oregon, Utah, Washington, British Columbia and Manitoba. Observers include Alaska, Idaho, Colorado, Kansas, Nevada, Wyoming, Ontario, Quebec, Saskatchewan, and the Mexican State of Sonora.17

In August 2007 the WCI set an overall regional goal for reducing GHG emissions. The WCI aims to set regional GHG emissions goals to develop multi-sector market mechanisms to support emissions reductions and participate in a GHG registry to enable tracking, management and trading of GHGs. The aggregate emissions reductions goals have been set at 15% below 2005 levels by 2020.18

By August 2008 WCI intends to complete the design of a market-based mechanism to assist in achieving their reduction goals. On October 27, 2007, the WCI published a work plan in which it sets out how it will develop a regional cap and trade program.19 The work plan sets out the underlying principles of the cap and trade system and provides that the proposed system will:

- Be equitable, administratively simple for government and private participants, minimize administrative costs, and have a clear compliance path.
- Maximize total benefits throughout the region, including reducing air pollutants, diversifying energy sources, and advancing economic, environmental, and public health objectives, while also avoiding localized or disproportionate environmental or economic impacts.
- Require all reductions to be real, surplus, additional, verifiable, permanent, and enforceable.
- Stimulate investment, especially in low carbon technologies, and rewards innovations that will lead to long-term permanent greenhouse gas reductions.
- Cover as many sources as is practical, while encouraging pollution reductions beyond the capped sources and sectors.
- Provide appropriate recognition and incentives for early emissions reductions.

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emissions trading and climate change

- Assure a transparent and robust accounting system that will measure and report emissions rigorously and consistently across all sectors and throughout the region.
- Minimize the potential for leakage.
- Facilitate linkage to similarly rigorous regional and international GHG reduction markets and encourage other states, provinces, and countries to join the market.

(f) New England Governors/Eastern Canadian Premiers Climate Change Action Plan ("NEG-ECP")

In 2001, the New England Governors (Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire and Maine) ("New England States") and the four Atlantic Provinces and Quebec ("Eastern Provinces") drafted a Climate Change Action Plan to address regional, cross-boundary issues.20 The Plan sets out a reduction target of 10% below 1990 levels by 2020.

In 2001, the NEG-ECP developed the Climate Change Action Plan, a comprehensive and coordinated regional plan for reducing greenhouse gases that includes a goal of achieving 1990 emission levels by 2010 and 10% below 1990 levels by 2020. The states and provinces of the NEG-ECP are developing a variety of programs and policies, including RGGI, to meet their commitments.21 The NEG/ECP Climate Change Action Plan identifies steps to address those aspects of global warming which are within the region’s sphere of influence. Specifically, the action plan includes:

- A comprehensive and coordinated regional plan for reducing greenhouse gases.
- A commitment to reach specified reduction targets for the region as a whole.
- A commitment from each state and provincial jurisdiction to carry out its own planning for climate change gas reductions with a coordinated process that includes disclosure of progress, and a sharing of information including case studies of how various programs are working.
- A plan for the adaptation of the region’s economic resource base and physical infrastructure to address the consequences of climate change.
- A public education and outreach effort to ensure that the region’s citizens continue to be educated about global warming and climate change in order to better protect the earth’s natural climatic systems and natural environment.

The action plan is intended to reduce the region’s emissions of heat-trapping gases and to build the foundation for a longer-term shift to cleaner and more efficient ways of using energy, as well as identifying and adopting adaptive measures.

In 2006, The New England States and Eastern Provinces entered into the "Climate Change Roadmap for New England and Eastern Canada" recommended implementing a RGGI-like cap and trade program to reduce GHG emissions for all New England States and Eastern Provinces.22

(g) Midwestern Greenhouse Gas Accord

On November 15, 2007, the governors of six Midwestern states (Illinois, Iowa, Kansas, Minnesota, Michigan and Wisconsin) and Gary Doer, the premier of Manitoba signed on to the Midwestern Greenhouse Gas Reduction Accord, which is the first multi-state program in the U.S. Midwest.23 Indiana, Ohio, and South Dakota have signed on as observers. The parties have resolved to set up a market-based and multi-sector cap and trade mechanism to achieve GHG reduction targets. They also agreed to join The Climate Registry to enable tracking, management and crediting for entities that reduce GHG emissions. Credit trading would begin in 2010. No reduction goal has been established yet.24

20 http://www.negc.org/documents/
21 http://www.pewclimate.org/what_s_being_done/in_the_states/regional_initiatives.cfm
(h) The Climate Registry

The Climate Registry is an inventory that tracks and registers GHG emissions for potential carbon markets.\(^25\) The Climate Registry is an accounting, reporting and verification system that could support both voluntary and mandatory systems. All Canadian provinces have agreed to join the forty-state climate registry. Two American Indian governments and a Mexican state have also joined. The Climate Registry is designed to support state and provincial GHG reporting and reduction policies. It will provide an “accurate, complete, consistent, transparent and verified set of greenhouse gas emissions data from reporting entities” supported by an accounting and verification infrastructure. The registry will begin accepting data from reporting entities in January 2008. A number of related protocols and quantification guidelines are being developed.

4. CHICAGO CLIMATE EXCHANGE

(a) Overview

The Chicago Climate Exchange (“CCX”) is a voluntary GHG reduction and trading system for emission sources and offset projects.\(^26\) Operating as a baseline and credit-trading system, the CCX emitting members (there are four types of membership, see below for further details) have voluntarily agreed to reduce their GHG emissions below their respective baseline emissions. CCX members include major companies, non-governmental organizations, utilities, cities and universities. The CCX is a Commodity Future Trading Commission (“CFTC”) designated contract maker and offers standardized and cleared futures contracts. CCX has an agreement with the NASD, Inc. to provide oversight and regulatory services. NASD Inc. assists in registration, market oversight and compliance procedures, as well as providing other services, including auditing services to verify baselines, measurements and offset project verifications.

(b) Emission Reduction Schedule

Operation of the CCX began in December 2003 and CCX reduction commitments and trading applied for the years 2003 through to 2010, with the first compliance period (“Phase I”) ending December 2006. The second compliance period (“Phase II”) is slated to end in 2010. The baseline emissions are specific to each member and are calculated for both Phase I and Phase II by taking the average emissions of each member’s respective operations from 1999 through to and including 2001. The CCX has emissions reduction targets of 6% below the members’ baselines by 2010. The reductions are made through a legally binding compliance regime, with independent third party verification and price transparency. Members can meet their targets by reducing emissions or by purchasing allowances from other CCX members who are below their emission targets or by purchasing offsets from third parties.

(c) Tradable Instrument

The tradable instrument on the CCX is a CCX Carbon Financial Instrument (“CFI”), a cash product representing 100 tons of CO\(_2\) equivalent (“CO\(_2\)eq”). The CCX calculates a CO\(_2\)eq using the same methodology applied by the Kyoto Protocol: the emissions of five additional GHGs (apart from pure CO\(_2\)) are converted to CO\(_2\)eq using the Global Warming Potential that was developed by the IPCC. Trading on the CCX has increased dramatically in 2007 with total trading for the first half of 2007 surpassing the volume recorded in 2006. CCX recorded a volume of 11,850,300 tons of carbon in the first half of 2007 versus 10,272,400 tons in 2006. As of September 7, 2007, CFI Vintage 2007 credits were trading at U.S.$3.05.

The CFI contract is comprised of an Exchange Allowance and an Exchange Offset. Exchange Allowances are issued to Members in accordance with their emission baseline and the CCX Emission Reduction Schedule.

\(^{25}\) http://www.theclimateregistry.org/
\(^{26}\) http://www.chicagoclimatex.com/
Who Can Participate

The CCX qualifies as an Exempt Commercial Market under the U.S. Commodity Exchange Act and Part 36.3 of the CFTC regulations. As such, “eligible commercial entities,” as defined in section 1a(11) of the Commodity Exchange Act, are allowed to participate on the CCX. The CCX has 300 members or participants who are categorized into one of four membership categories, each category having different roles and participation levels on the CCX. “CCX Members” are those entities that have direct GHG emissions anywhere in the U.S., Canada or Mexico. “CCX Associate Members” do not have direct GHG emissions, but rather comply with CCX rules by offsetting all indirect emissions associated with their business related activities. The third category of CCX participants is a “CCX Participant Member” and is comprised of Offset Providers (described further below) and Liquidity Providers. “CCX Exchange Participants” make up the final category and are entities that have created a CCX Registry Account for the purpose of acquiring and retiring CFIs.

Transaction Methods and Delivery Process

Trading occurs through a web-based system and prices and volumes are posted on the CCX website. The CCX trading system is comprised of three separate components:

- The Trading Platform is a marketplace for executing trades among Registry Account Holders. There are three transaction methods: (i) an internet-based trading system employing a traditional exchange-cleared offer and bid system (thereby preserving anonymity); (ii) the exchange of electronic bilateral agreements between the various classes of CCX members; and (iii) pre-negotiated block trades and cash transactions.

- The CCX Clearing and Settlement Platform processes all transaction information. The exchange-cleared transactions are cleared on the trade day, whereas the bilateral agreements are settled by the participating parties.

- The CCX also operates a registry that serves as the official database for CFIs owned by Registry Account Holders.

Offsets

Entities may also participate in the CCX through offset projects. The CCX officially recognizes several types of offset projects, including forestry, agricultural soil carbon, agricultural methane, and landfill methane. Other projects approved on a project basis are those relating to energy efficiency and fuel switching and CDM eligible projects. CCX has developed standardized rules for issuing CFI contracts in these projects. NASD assists with offset project verification.

CCX issues CFI contracts to owners or aggregators of eligible projects. Offset projects can be registered by Members, Offset Providers and Offset Aggregators. Offset Providers and Offset Aggregators cannot themselves have significant GHG emissions. Entities with significant GHG emissions are eligible to participate if they have to commit their own emissions to the CCX Emission Reduction Schedule as Members.

An Offset Provider is an owner of an offset project that registers and sells offsets on its own behalf. An Offset Aggregator is an entity that services as the administrative representative on behalf of project owners, of multiple offset generating projects.

Participants must have their projects verified by CCX-approved verifiers and, if approved, they may then register and trade their carbon dioxide emission offsets on the CCX. The CCX allows for smaller offset-generating projects to be registered through an Offset Aggregator, who serves as an administrative representative. Those entities that own and operate offset projects involving more than 10,000 metric tons of CO₂eq per year participate directly on the CCX.

Related Activities

The CCX has also announced the formation of the New York Climate Exchange (“NYCX”) and the Northeast Climate Exchange (“NECX”) to develop financial instruments relevant to RGGI. Currently, RGGI schedules set out the first compliance period to occur in 2009-2012.
and the NYCX and the NECX are scheduled to commence operations at that time. The CCX has also announced the creation of a California Climate Exchange that will trade instruments relevant to California AB 32.

The Chicago Climate Futures Exchange (the “CCFE”), a wholly-owned subsidiary of the CCX and a CFTC designated contract maker, offers standardized and cleared futures and options contracts on emission allowances and other environmental products. Clearing services are provided by the Clearing Corporation and market surveillance services are provided by the National Futures Association. The CCFE trades four futures and options products: Certified Emissions Reductions, Carbon Financial Instrument Futures Controls, ECO Index Futures Contracts, Nitrogen Financial Instruments and Options on Sulphur Financial Instrument Futures Contracts.

In 2005, the CCX launched the European Climate Exchange (“ECX”) which is an exchange operating in the European Union Greenhouse Gas Emissions Trading System (“EU ETS”). Both the CCX and the ECX are owned by Climate Exchange plc, an AIM-listed company. The CCX is linked to the EU ETS through the ECX and allowances held in an “EU ETS” account can be transferred between the two systems. This is useful to a polluting entity with operations in both Europe and the United States that holds GHG accounts in several jurisdictions. An account holder with excess EU allowances could transfer those allowances to the CCX to meet GHG compliance measures in the United States. The transfer consists of three steps: (i) a CCX registry account is set up in the United Kingdom; (ii) the EU allowances are transferred to the CCX U.K. account; and (iii) the CCX cancels the EU allowances and issued an equivalent amount to the account holder’s CCX U.S. account. The CCX is also developing an India Climate Exchange.

In July 2006, the CCX entered the Canadian market by combining forces with the Montréal Exchange (“MX”), Canada’s financial derivatives exchange, to create a Canadian-based environmental products market. The newly formed Montréal Climate Exchange (“MCEX”) is a result of a preliminary agreement that was signed between the two parties at the first meeting of the Parties of the United Nations Framework Convention on Climate Change in December 2005. A Request for Comments was published by the MX on October 5, 2007 which sets out how the MCEX will operate.

5. THE “GREEN EXCHANGE”


The Green Exchange will offer trading in global carbon-based contracts such as carbon allowances under the EU ETS, carbon credits under the Kyoto Protocol Clean Development Mechanism, and verified greenhouse gas emission reductions under voluntary carbon standards. The Green Exchange will also offer contracts for U.S. SO2 and NOx emissions allowance trading programs, as well as contracts for national Green-e(TM) certified voluntary renewable energy certificates.

http://www.planetark.org/dailynewsstory.cfm/newsid/35671/newsDate/16-Mar-2006/story.htm
http://www.csrwire.com/News/10439.html

http://www.m-x.ca/f_comm_press_en/011-06_en.pdf
http://www.m-x.ca/f_circulaires_en/155-07_en.pdf

6. VOLUNTARY MARKETS

The voluntary carbon markets predate the Kyoto Protocol and dominate the U.S. carbon marketplace. The earliest deals began and grew throughout the 1990’s but suffered a decline for a brief period of time when the U.S. withdrew from the Kyoto Protocol. The concept of companies offsetting some or all of their emissions has fuelled the development of the voluntary markets in the United States as has the emergence of investment funds that focus on carbon projects and emissions credits.\(^{37}\) The voluntary markets which are a small portion of the global carbon markets, grew 200% in 2006 (20 MtCO\(_2\)e in 2006) and are worth approximately U.S.$91 million.\(^{38}\) Currently, U.S. companies are almost 70% of the unregulated carbon market’s customers.\(^{39}\) Earlier this year it was estimated that U.S. demand for offset credits under the voluntary market could double annually to 250 MtCO\(_2\)e by 2011.\(^{40}\)

7. CONCLUSION

Carbon emission trading currently exists in the United States in the voluntary markets and is expected to increase once the various state and or federal systems become effective. Canada’s current federal government has indicated its preference for a north-south trading system over direct participation in the Kyoto Protocol. This will likely directly and indirectly foster increased integration of the Canadian and U.S. carbon markets. The lack of federal carbon emissions trading initiatives in both the United States and Canada has already resulted in a number of collaborations between American States and Canadian provinces.

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\(^{39}\) Anne-Marie Warris, the Lloyds Register, November 17, 2007 http://www.planetark.com/dailynewsstory.cfm/newsid/45202/story.htm


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The foregoing provides only an overview. Readers are cautioned against making any decisions based on this material alone. Rather, a qualified lawyer should be consulted.

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Innovation and strategic thinking are the hallmarks of our interdisciplinary Emissions Trading and Climate Change Group. Incorporating lawyers from our Energy, Environmental, Natural Resources, Structured Products, Mining, Public Policy, Public Markets, and Tax Groups, our highly skilled team advises clients on the complex compliance issues and burgeoning business opportunities that greenhouse emission reductions and trading are generating globally.

Along with our experience in all aspects of business law, our team includes specialized expertise in energy, mining, securities law, environmental law, government regulation, public policy, and Russian law and commerce, as well as hands-on experience helping establish Ontario’s NOx and SOx emissions trading registry. Licensed in Ontario, Quebec, New York and Russia and fluent in English, French, Spanish, and Russian, our team’s experience includes legal practice in Canada, China, Japan and Russia.

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