

Confronting the carbon challenge: Business implications of the developing North American carbon markets



Momentum for development of North American carbon markets continues to grow, driven by the need to participate in international negotiations to be held in Copenhagen later this year, by the commitments and actions of the new U.S. administration, and by the steady progress of the Western Climate Initiative (WCI), among other influences. Businesses have accordingly been prompted to react to these existing and emerging U.S., Canadian, and cross-border carbon markets.

U.S. carbon markets

A carbon cap-and-trade system in the United States is on the horizon, as evidenced by President Obama's budget projections for 2012 onward, which include \$80 billion per year of revenue from government sales of carbon credits. Legislative progress toward such a system continues despite some delays. Though it was defeated in committee last summer, the Lieberman-Warner Climate Security Act's progress within Congress represented a significant step toward federal legislation on climate change. Congressmen Henry Waxman's and Edward Markey's Clean Energy and Security Act ("Waxman-Markey"), introduced in late March of 2009, looks to build on Lieberman-Warner to create a cap-and-trade bill acceptable to a broad cross-section of states and business interests (most notably, the U.S. Climate Action Partnership, whose proposals are closely echoed in the bill). This is no easy task, since representatives from coal-rich states have already been at odds with representatives from states with a more renewables-based energy mix. Issues central to the debate include magnitude of targeted reductions, speed of targeted reductions, included industries, eligible offset types and quantities, and point of regulation, as well as the role of broader clean-energy measures, which Waxman-Markey firmly postulates must be integrated with carbon measures. Moreover, various legislative efforts have proposed a grab-bag of regulators to police the markets – the Environmental Protection Agency (EPA), the Federal Energy Regulatory Commission, the United States Department of Agriculture, the Commodity Futures Trading Commission, and a newly created agency that is specific to carbon markets.

On the regulatory side, the Supreme Court's April 2007 decision in *Massachusetts v. EPA* gave the EPA authority to regulate carbon dioxide (CO₂) as a pollutant under the Clean Air Act. On March 10, 2009, the EPA released a proposed mandatory greenhouse gas (GHG) reporting rule, which will require annual reporting of GHG emissions from 13,200 facilities, beginning in 2010. Also, in April the EPA released its long-awaited "endangerment" finding on CO₂, citing greenhouse gases as pollutants. These two actions set the stage for far more robust, direct regulation of greenhouse gases, although it remains to be seen how this regulation will intersect with legislative efforts.

Finally, at the state and regional levels, a "patchwork quilt" of carbon trading programs has emerged, most prominently the Regional Greenhouse Gas Initiative (RGGI) in the Northeast, which began trading in January 2009 and the developing WCI, which spans the Western United States and Western Canada.

RGGI is modest in scope, encompassing only electricity-generating installations of 25 megawatts or larger and including only CO₂ emissions. This translates into 225 facilities across the program's 10 states, which are collectively expected to stabilize CO₂ levels between 2009 and 2014 and then reduce them by 10% below 2009 levels by 2018. While these targets have come under fire for being too easy to achieve¹, the program notably implements nearly 100% auctioning (with funds destined for various state clean energy/energy efficiency programs.)² Two auctions have been held thus far and both were considered successes by technical measures³. RGGI credits currently trade on the Chicago Climate Exchange (CCX) and the New York Mercantile Exchange green exchange; daily volumes on the CCX have averaged in the hundreds of thousands and prices have traded in a tight range between \$3.43 and \$4.50⁴.

¹ <http://www.nicholas.duke.edu/nicholas/insider/thegreengrok/capandtrade>

² RGGI Model Rule, found on rggi.org

³ http://www.rrgi.org/docs/Auction_3_News_Release_MM_Report.pdf

⁴ http://ccfe.com/mktdata_ccfe/futuresSummary.jsf?symbol=rggi

Cross-border carbon markets

WCI, in contrast, is more ambitious in scope. Targeting a 15% reduction below 2005 levels in 2020 for seven U.S. states and four Canadian provinces, the program includes all six greenhouse gases for electricity generation and large industrial facilities in Phase I, which occurs from 2012 to 2014, that emit 25,000 tonnes of CO₂e per year or more. Transportation, residential, commercial, and industrial fuels are added in Phase II, which occurs from 2015 to 2020. A notable feature of WCI (and of member state California's landmark legislation AB 32), is how the program identifies the point of regulation (PoR), the category of entity within each sector that is charged with complying with carbon regulation. Within the WCI program, the PoR will typically be the emitting sources, electrical generators, other stationary combustion sources, and industrial process emission sources. Importers of electricity will also be treated as a PoR. Suppliers of transportation, residential, commercial, and industrial fuel will be required to surrender allowances equal to the GHG emitted when their customers burn the fuel.

Canadian carbon markets

North America's first mandatory carbon market opened on July 1, 2007, in the province of Alberta. This market, created by the "Specified Gas Emitters Regulation," is distinctive because it is based on emissions intensity limits, rather than absolute emissions limits. Facilities that emit more than 100,000 tonnes of CO₂e per year are required

quantification protocols approved⁷. Emitters also have the option to pay \$15 per tonne of CO₂e to the Climate Change and Emissions Management Fund.

Ontario is considering a provincial cap-and-trade program, which would take effect on January 1, 2010⁸. The program would include facilities that emit more than 100,000 tonnes of CO₂e per year. The intention would be to "learn by doing" in anticipation of the WCI regional program or other cap-and-trade schemes.

In March of 2007 the Canadian federal government published "Turning the Corner", which outlined the plan for an intensity-based cap-and-trade scheme⁹. With the change in the U.S. administration, there are suggestions that the Canadian federal government will focus on developing a cap-and-trade scheme that will be consistent with the U.S. carbon market, in order to avoid the issue of "border adjustments," which might otherwise be charged on Canadian exports to the United States¹⁰.

Implications for businesses

What does all this mean for businesses? The implications can be significant, including the following:

- **Substantial incremental costs for entities in regulated carbon markets.** Since the details of the emissions trading programs are still evolving, understanding and projecting the cost for a given business means grappling with such uncertainties as determining the point of regulation (PoR), industries to be included in trading, and options for offsetting. The ability to pass carbon cost to customers can determine the effect on profitability.
- **Business strategy.** Companies may find it important to integrate the price of carbon into their overall business strategy. Given the regulatory uncertainty, using scenarios can be important in developing business strategy. These scenarios need to be internally consistent, recognizing the correlations among regulatory options, pace of technology implementation and resulting commodity prices. Strategies should incorporate related policies, such as low carbon fuel standards, renewable electricity standards and incentives for clean energy.
- **Risk Identification.** Carbon markets can introduce a broad range of risk types, including price risk, credit risk, operational risk, and regulatory risk, among others. Companies could use a structured approach to risk identification so that significant risks are identified and managed appropriately.

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to reduce their emissions intensity by 12%, relative to a baseline established over the 2003–2005 period⁶. Emitters have three compliance options. They can reduce their emissions so that their emissions intensity is 12% below their baseline. Offset credits can be purchased for compliance, and there are more than 20 different offset

⁵ Entire paragraph's factual information comes from Design Recommendations for the WCI Regional

⁶ Cap7and7Trade Program, September 2003, 2008 and Climate Change Proposed Scoping Plan: a framework for change, California Air Resources Board, October 2008, approved on December 11, 2008.

⁷ http://environment.alberta.ca/documents/Baseline_FAQ.pdf

⁸ www.carbonoffsetsolutions.ca

⁹ Discussion Paper – A GHG Cap and Trade System for Ontario Dec. 2008 http://www.ene.gov.on.ca/envision/env_reg/er/documents/2009/010-5484.pdf

¹⁰ http://www.ec.gc.ca/doc/media/m_124/toc_eng.htm "Canada's tar sands face potential threat from US legislation" Point Carbon, Carbon Markets North America, April 3, 2009

- **Governance and organization design.**

Understanding of carbon markets should flow through organizational decision making. New policies and procedures, and appropriate internal controls may be needed to govern management of this new commodity. Definition of roles and responsibilities should address which functions are centralized and which are carried out by the business units.

- **Carbon price impacts on contracting and capital allocation decisions.**

Understanding the cost of carbon and including it in an analysis of future capital allocations can be a game-changer. Moreover, even the simplest energy contracts should consider carbon, both in terms of outright cost and issues, such as ownership of environmental assets or obligations. Companies should understand the extent to which they will be able to recover carbon costs under the terms of existing contracts.

- **Carbon as a commodity — companies may need a hedge strategy.**

Hedging may entail simply buying tradable allowances, however, many businesses may also find themselves buying carbon offsets. Legislative efforts to date have incorporated offsets as a key price control mechanism but supply, particularly in the early years, is uncertain. Companies intending to actively participate in cap-and-trade markets should assemble systems to develop, buy and trade offsets (a somewhat complicated procedure, more akin to project finance than plain-vanilla commodities trading). Market designs may include multiyear emission compliance periods, although many companies will want to hedge exposures over shorter periods, either to address financial statement volatility, or to manage risk associated with passing costs to customers.

- **Reconsidering accounting policy elections.** The accounting treatment of emission credits is challenging, since there is divergence in practice in how companies account for emission rights with some treating them as inventory and some as intangible assets. Since the effects on the balance sheet and income statement may differ depending on which treatment is applied and by what degree of regulatory recoverability applies, comparability among entities may be difficult. This could have significant implications not only for reporting financial performance, but also on companies' strategic decisions on how to participate in cap-and-trade programs. Companies should explain their related accounting policies to the market to ensure that the financial statement effects of their use of emission rights and related contracts are properly understood. Forwards, swaps, and options would likely be accounted for as derivatives if financially settled, although deal structure and market liquidity should be considered in assessing an entity's ability to truly settle these positions on a net basis.

- **Significant financial statement implications.**

Financial statement implications include, but are not limited to, five major areas: 1) accounting for carbon regulatory obligations, 2) accounting for held emissions rights and offsets, 3) accounting for forward contracts to buy and sell credits (including futures and over-the-counter forwards, swaps and options), 4) issues of impairment for emissions credits, and 5) regulatory treatment for recovery of the cost of emissions credits. The accounting for obligations resulting from a cap-and-trade scheme, as well as the accounting treatment of credits and offsets could be material for many U.S. companies and will require specialized skill sets including fair value competency and measurement credentials.

- **Tax implications.** Limited guidance has been issued regarding the tax consequences of transactions involving emission allowances. While the accounting treatment for these allowances is not necessarily the right treatment for tax purposes, it does affect the information available for tax reporting purposes. The tax treatment of emission allowances depends in part on how the allowances are acquired (e.g., granted, acquired separately, acquired as part of a business), how the holder intends to use the allowances (e.g., in its generation operations, speculation) and how the holder disposes of the allowances (e.g., sale, exchange). Tax issues include, but are not limited to, character of gain or loss, timing of gain or loss, tax treatment of penalties imposed for violation of standards, transfer pricing and international tax issues, as well as apportionment for state tax reporting purposes.



- **Reporting and disclosure.** Carbon market designers, registries, states and the EPA are developing protocols for regulatory reporting, and these protocols may create a need for additional infrastructure in order for companies to comply. The requirements for regulatory reporting begin as early as January 2010. In addition to regulatory reporting, businesses should address management and corporate reporting needs. Will management, and the hedging function, need more frequent reports than the annual regulatory reports? Shareholders and regulators are also making additional requests for disclosure, which could require risk assessment and a discussion of strategy.
- **Implication on companies that are not regulated by the carbon trading program.** Businesses that are not required to comply with a carbon market cap may still see significant implications, since carbon costs will cause an increase in the price of other commodities, particularly electricity and natural gas. Companies should include a range of carbon prices in their scenario planning.
- **Cost of carbon in asset valuations.** Once regulated, carbon will have a value associated with it. Wherever transactions occur involving carbon-related assets, businesses will need to record the fair value of their carbon positions to present a fair picture to the market and investors, as well as to gain a fair return on any asset sales. Valuing these assets fairly will create challenges, particularly during the early stages of market development when markets may be illiquid or have few players.
- **Fraud risk related to carbon.** As markets evolve, instances of fraud related to carbon may emerge. Fraud may be especially prevalent during the early stages of regulation by those looking to take advantage of naive market participants. Fraud can occur in various places in the carbon market and for various reasons, including underreporting of carbon emissions expenses in order to increase asset values, overreporting of offset purchases in order to reduce investments in carbon reduction mechanisms, and exaggeration of the carbon reductions associated with offset projects are all schemes that could occur. Assuming there is market trading, the markets will also be susceptible to market manipulation and excessive speculation. Therefore, just as businesses guard against financial fraud, carbon fraud will similarly have to be monitored and guarded against within businesses' operations.

- **The need to be actively involved in shaping the details.** As the markets evolve, a myriad of details will need to be considered when formulating how the markets will operate and businesses will participate and report. The uniqueness of carbon regulation and the political environment under which new carbon regulations will go into effect mean that there are no precedents that can be easily copied. Lawmakers and regulators are putting together complex and inter-related requirements for reporting, tracking, and trading. Now is the time for businesses to be active participants in the market rules formulation — not just to advocate on overall position, but to understand the finer details of how the markets are designed to work and to respond appropriately with comments and observations.

All in all, as carbon markets develop in North America, businesses are challenged to manage a wide variety of effects. How nimbly they respond will perhaps define competitive positions in the cap-and-trade era that becomes more imminent with each passing day.



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