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Trading in CO₂ Credits: Tax Issues to Consider

By Maureen Francis Mascha, J. William Harden, and James Trebby

The issue of limiting carbon emissions has recently commanded international attention. Starting with the 1997 Kyoto Protocol, world markets have begun to coalesce around the notion that carbon dioxide (CO₂) emissions should be controlled or capped. There are three generally accepted methods for limiting the emission of CO₂: 1) a carbon tax that charges producers a fee for emissions that exceed a prespecified amount; 2) an auction, in which organizations bid on credits that are then used to offset the amount of actual CO₂ emitted; and 3) a “cap and trade” system.

The cap and trade system proposed at Kyoto envisioned that a limit (i.e., cap) would be imposed by the government on the amount of CO₂ emissions allowed in a given period. Organizations with emissions that do not exceed the limit are free to trade the difference between the cap and their expected amount of emissions as “CO₂ credits.” Likewise, organizations that anticipate exceeding the limit may purchase these credits in order to exceed the cap amount. The economics of purchasing the credits make sense when their cost is less than the cost required to reduce emissions below the cap.

In essence, an auction and cap and trade system are similar in that entities can purchase credits outright, with a government usually controlling the number of credits auctioned. They are dissimilar in that the auction is not a secondary market where firms can trade previously purchased credits. Unfortunately, the cap and trade system is not optimal in the long term from a pollution control perspective, in the sense that each player in the economy is not forced to lower emissions. It is, however, practical for many businesses and offers a more palatable transition toward eventual lower emissions overall. Because the most prevalent method used today is the cap and trade system, this article will focus on that methodology.

Most of the cap and trade activity has occurred in Europe, but carbon trading is emerging as a very real possibility in the United States, particularly with global warming moving up in the political agenda. While action at the federal level had been stagnant under the Bush administration, individual states started to take action to reduce emissions (e.g., California's promoting the use of carbon credits for reducing emissions). While there is no regulatory guidance in the evolving CO₂ area, the U.S. Treasury has issued regulations dealing with the similar cap and trade system for sulfur dioxide (SO₂) emissions.

What follows is a review of the federal tax precedent established for SO₂ credits. The authors believe these rules may eventually be applied to CO₂ credits. Familiarity with current practice will be helpful until the IRS specifically clarifies if rules governing SO₂ credits will be applied to CO₂ credits.

Sulfur Dioxide Credits

While the focus on carbon emissions is relatively new, the issue of controlling emissions is not. Title IV of the Clean Air Act Amendments of 1990 charged the Environmental Protection Agency (EPA) with regulation of SO₂ emissions. A major provision specified that the EPA would control compliance through the regular issuance of credits which could be used to offset actual emissions. The credits, issued at no cost to the recipient (usually a utility), limited the amount of allowable emissions by setting a de facto ceiling (i.e., the sum of the credits). The EPA moni-

tored actual emissions, providing regulatory enforcement. In response to the issuance of SO₂ credits, the IRS issued Revenue Procedure 92-91, which provides guidance on how the credits should be treated from a tax standpoint.

Because the practice of carbon trading loosely follows the parameters established under the Clean Air Act, it is expected

While similarities exist between SO₂ and CO₂ credits, there are also differences in the business arena and in the underlying rights that could create distinct tax rules in trading credits.

that the tax issues surrounding the purchase, sale, and exchange of CO₂ credits will fit within the framework adopted for the treatment of SO₂ credits found in Revenue Procedure 92-91. The IRS has not issued similar guidance for CO₂ credits, but given the economic similarity between SO₂ and CO₂ credit trading systems, it is likely the IRS would recommend similar tax treatment.

Regulation Procedure 92-91 provides the following:

■ Credits issued by the EPA to utilities have a zero basis rather than a fair market value basis because they were allocated, not purchased. If costs are incurred to acquire or hold the credit, then these costs must be capitalized.

■ Credits purchased, rather than granted, are to be recorded at cost (including transaction costs), and this cost should be capitalized.

■ Credits are generally treated as capital assets. If the taxpayer holds this type of credit as inventory, then the gain upon sale is ordinary.

■ Credits are not depreciable because they do not have a set useful life. The taxpayer claims a deduction in the year that offset SO₂ is emitted.

■ Credits can be sold or exchanged.

■ If credits are sold, the gain or loss is capital in nature unless the seller is engaged in the sale of these credits as a regular business, in which case the gain or loss is ordinary in nature.

■ The exchange of credits qualifies as a like-kind exchange under IRC section 1031, resulting in no gain recognition at the time of the exchange. In this case, basis is carried over in accordance with section 1031.

■ The withholding and sale of credits by the EPA is treated as an involuntary conversion. The purchase of replacement credits is treated as similar-use property for IRC section 1033 purposes.

■ In the case of persons acting as investors or traders of SO₂ credits, the same rules apply where applicable.

Differences Between CO₂ and SO₂ Credits

While similarities exist between SO₂ and CO₂ credits, there are also differences in the business arena and in the underlying rights that could create distinct tax rules in trading credits. The key differences are as follows:

■ CO₂ credits are purchased. They are not allocated by the EPA and, therefore, should always have a starting basis equal to what was paid for them, which cannot be zero.

■ There is generally an expiration date for carbon credits, so amortization must be considered.

■ Active markets exist for the trading of carbon credits [e.g., Clean Development Mechanism (CDM), Chicago Climate Exchange, and the European market for the trading of carbon credits. See www.cdm.org and www.chicagoclimateexchange.com for more information]. The market value of carbon credits is volatile, making gains or losses from the trading of such credits likely.

■ No single regulatory body is currently responsible for monitoring compliance in the United States (i.e., setting carbon limits and measuring actual emissions). While the Chicago Climate Exchange offers what is presumed to be an efficient market that should detect and "punish" rogue firms

STATE TAX INITIATIVES

Many states have enacted or proposed legislation regulating the emission of carbon dioxide. The majority of this legislation sets limits on the amount of CO₂ that can be emitted in a given amount of time (e.g., 40 tons per year). Some limits are voluntary and some are mandated, but the general goal is to lower CO₂ emissions. The following are summaries of initiatives in states invoking cap and trade systems or imposing a carbon tax in their legislation. Also included are summaries of initiatives derived by regional associations formed by a consortium of more than one state, as well as other current issues affecting state regulation of CO₂ credits.

New York

Enacted 2005. On December 20, 2005, New York State entered into a regional agreement to reduce greenhouse gas (GHG) emissions from power plants. Under the agreement, New York joined 10 other northeast and mid-Atlantic states to propose the Regional Greenhouse Gas Initiative (RGGI). The initiative, originally established in 2003 (see below), seeks to voluntarily cap and reduce carbon dioxide (CO₂) emissions from power plants in the region by 10% by 2019.

Enacted 2001. Executive Order 111, signed by Governor George Pataki, referred to as the "Green and Clean" state buildings and vehicles guidelines, mandates a reduction in greenhouse emissions for all state-operated buildings and vehicles. The order contains numerous directives designed to reduce energy use and the carbon impact caused by the state government.

Enacted 2000. In May 2000, New York State enacted the Green Building Tax Credit (GBTC) for owners and tenants of buildings that meet energy, indoor air quality, materials, and water conservation goals, among other criteria. The GBTC is prospective in nature in that it provides a tax incentive for ongoing maintenance, as well as an incentive for the initial cost of compliance. The GBTC allows licensed architects and engineers to certify compliance.

Proposed. In order to execute New York's commitment to the RGGI, the Department of Environmental Conservation has proposed statute 6 NYCRR Part 242 and Part 507. Part 242 establishes the CO₂ Budget Trading Program designed to allocate CO₂ emissions allowances to an Energy Efficiency and Clean Energy Technology Account, while Part 507 allows the trading of these allowances through auctions overseen by the New York State Energy Research and Development Authority (NYSERDA). Revenue from the sale of these allowances will fund programs promoting energy efficiency, renewable or non-carbon-emitting technologies, and innovative carbon-emissions technologies with significant carbon-reduction potential.

California

Enacted 2006. The Global Warming Solutions Act of 2006 (AB 32) is the most comprehensive legislation addressing greenhouse gas emissions in the United States to date. AB 32 mandates that carbon emissions be tracked, sets predefined limits as to the amount of CO₂ that can be legally emitted, reduces this limit beginning in 2010 and thereafter, imposes penalties and fines if those limits are not met, and specifically mentions a cap and trade system as an alternative to fines and penalties. Additionally, AB 32 segments organizations into

"projects" (i.e., similar types of organizations): forestry, building energy, landfills, manure management, and SFG. Emissions are a function of which type of project is applicable to the organization, meaning that one organization may find itself in more than one segment.

Colorado

Enacted 2007. Boulder, Colo., began taxing the use of carbon energy (i.e., use of any nonrenewable energy source).

Proposed. Colorado is considering a tax on any consumption of nonrenewable energy.

Illinois

Enacted 1997. Illinois passed the Volatile Organic Compound Act which aims to reduce the emission of 100 sources of pollution within an eight-county area. Participants trade credits for not only CO₂, but other organic pollutants as well. Participation is voluntary.

Kansas

Enacted. Kansas has enacted an income tax credit for the purchase of alternative fuel vehicles.

Oregon

Enacted. Oregon requires that new power plants (and other large energy facilities) offset a significant portion of their carbon dioxide emissions. There are two ways to comply: through the use of offset projects (where renewable energy is produced to offset carbon-based energy) or the "monetary path." The latter option involves payment of a fee (sometimes referred to as a "tax") equal to \$0.85 per short ton of excess CO₂ emission beyond the preset limit. If the actual emissions exceed the projected emissions prorated for a five-year period, the energy producer must offset the excess emissions using the monetary path. If the energy producer has not emitted CO₂ equal to the prorated amount in previous five-year periods, the state will credit it with the "unused" emissions to determine the net amount of excess emissions the certificate holder may have to offset in future reporting periods. It is anticipated that credits for emissions under the limit can be traded.

Washington

Proposed. Washington is considering investigating the feasibility of a cap and trade system for reducing gas emissions. Under the proposed legislation, power plants are required to reduce their CO₂ emissions by 20% over a period of 30 years. The CO₂ may be mitigated by payment to an independent qualified organization; by direct purchase of permanent carbon credits from real, permanent, verifiable CO₂ mitigation not otherwise required or used for other CO₂ mitigation projects; or by direct investment in CO₂ mitigation projects. Direct investments are limited in amount to no more than the cost of a lump-sum payment option.

West Virginia

Enacted. West Virginia has enacted lower property and business and occupation (B&O) taxes for utility-owned wind turbines.

(Continues on page 46)

trading worthless credits, it is not regulatory in nature. Any actions it takes may be limited to civil, not criminal, remedies for injured parties.

Questions About the Tax Treatment of Carbon Credits

In light of the differences noted above, these distinctions are addressed by reference to the eight items provided in the question-and-answer framework articulated in Revenue Procedure 92-91.

Question one: cost basis. Essentially no differences should exist because Revenue Procedure 92-91 states that the costs related to the acquisition and holding of the credits are capitalized.

Question two: depreciation. No depreciation is allowed under Revenue Procedure 92-91. While this seems appropriate for credits that do not expire, it presents an issue for carbon credits that do expire. Because the market for carbon credits is relatively unregulated, carbon cred-

its (as well as other credits for gas emissions) can take virtually any shape or form,

The key issue for depreciating
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and their useful life varies significantly. Short-term credits are considered temporary, as are longer-lived credits that are leased or rented. Even renewable credits are risky, in that the underlying event that

allows for renewal may cease to exist and the credit may be deemed worthless. The key issue for depreciating the basis of the credit appears to hinge on the certainty of the useful life of the credit.

Question three: the use of credits against emissions. Revenue Procedure 92-91 states that credits applied to emissions should be charged to expense in the period in which they were used. This implies that purchasers of carbon credits would reduce taxable income by the amount of the credit used during a period. The cost is usually measured in tons, so firms would calculate how many tons were used and reduce their capital asset by the number of credits used to offset that tonnage. It is anticipated that CO₂ credits in the United States will be traded rather than used to offset emissions. In such cases, the cost will be recovered at the time of sale, as described below.

Question four: sale of credits. While Revenue Procedure 92-91 states that

Carbon credits come in many different types, with a multitude of terms, conditions, and expiration dates. It is therefore uncertain whether the provision in Revenue Procedure 92-91 for like-kind treatment would extend to CO₂ credits.

gains and losses arising from the sale of SO₂ credits are capital in nature as long as the entity selling the credit is not “holding a credit primarily for sale to customers in the ordinary course of trade or business of dealing in allowances,” it is unclear whether frequent trading by businesses whose primary purpose is not the sale or exchange of credits (e.g., utilities) still qualifies for capital gain treatment if their sales activity rises to a recurring

nature. Specifically, concerns exist with regard to the following issues:

■ The point at which a company becomes classified as a “trader.” The above excerpt from Revenue Procedure 92-91 suggests that the intent of the firm (i.e., principal business) is the defining criterion, but numerous examples from case law indicate that frequency of trading is also a criterion, leaving the determination an open issue.

■ The depreciation treatment of carbon credits. If carbon credits have a limited life and are depreciated, then the gain or loss on the subsequent sale of those credits could be subject to recapture.

■ The sale of credits that were anticipated to be used by the taxpayer to offset emissions (if such a system eventually appears in the United States). The concern is whether certain issues could cause the credits to be ordinary rather than capital in nature. This occurred, for example, in the case of *Corn Products Refining Co. v. Comm’r*, [350 US 46 (1955)]. The Supreme Court found that selling futures contracts related to purchasing raw materials caused ordinary income instead of capital gain. The company bought the futures to ensure adequate supply. If the contracts were not needed, they were then sold. The Court focused on the relationship of the futures to the ordinary operations of the business.

Question five: tax treatment of exchanges. Because SO₂ credits are uni-

REGIONAL INITIATIVES *(Continued from page 44)*

Northeastern United States

Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont are members of the Regional Greenhouse Gas Initiative (RGGI). Observers in the process of joining include Washington, D.C.; Pennsylvania; the eastern Canadian provinces; and New Brunswick.

Enacted 2003. A consortium of 10 northeastern states whose goal is to lower the amount of CO₂ emissions in their area formed the RGGI. The initiative begins capping emissions across the region on January 1, 2009, based on current levels, and calls for the lowering of the cap beginning in 2014 for the next four years. Unlike other initiatives, the RGGI mandates a cap and trade system. Under this system, each state is given “allowances” for its emissions, similar to the system for SO₂ credits. Each state has discretion for distributing these allowances. It can allocate them for free, sell them by auction, or use a combination of the two. The exception is that the RGGI stipulates that at least 25% of allowances be allocated “for a consumer benefit or strategic energy purpose.”

Western Regional Climate Action Initiative

Enacted 2007. This initiative is a collaboration between several U.S. states and Canadian provinces. It calls for a cap on emission levels and encourages a cap and trade system for voluntary compliance.

Additional Associations

Powering the Plains (PTP), Western Governors’ Association (WGA), and the New England Governors’ Conference, Inc. (NEG) have initiatives similar to those noted above.

Other Trends

While not unique to any one state, the use of “green tags” is gaining popularity. Green tags are certificates awarded by state and local governments to utilities for every 1,000 kilowatt-hours of noncarbon energy production; benefits include revenue derived from the sale of energy to the grid, as well as additional revenue earned through auctioning the certificates.

Even if no legislation currently exists, most states will be affected by efforts to limit carbon dioxide emissions, either directly at the state or federal level, or indirectly in the form of regional initiatives. One common theme that appears in recently enacted legislative initiatives is that CO₂ limits will be reduced over time, implying that compliance is transient and subject to change at any given point. As a result, the cost of reducing carbon emissions, in whatever form, is only likely to increase.

form in nature, exchanges of one credit for another do not trigger a taxable gain or loss; instead, they are treated as like-kind exchanges under IRC section 1031. Carbon credits, however, come in many different types, with a multitude of terms, conditions, and expiration dates. It is therefore uncertain whether the provision in Revenue Procedure 92-91 that SO₂ credits are eligible for like-kind treatment would extend to CO₂ credits. While one might initially assume that SO₂ and CO₂ credits should receive identical treatment, the market for CO₂ credits makes them appear much more like a security-type instrument. Because the like-kind provisions of IRC section 1031 do not apply to stock sales, it is uncertain whether the IRS would extend the like-kind provisions to CO₂ credits in the same manner as for SO₂ cred-

its. If U.S. taxpayers were required to use CO₂ credits to offset their emissions, then like-kind conversion rules should be applicable in those scenarios as they are currently for SO₂ credits.

Question six: involuntary conversions. Revenue Procedure 92-91 states that the involuntary conversion of SO₂ credits allows for the purchase of replacement credits which may be eligible for nonrecognition treatment under IRC section 1033. Because this issue was intended as a remedy for any credit withholding by the EPA, it is unclear whether involuntary conversions in general would apply. While the involuntary conversion rules are stricter in terms of replacement property requirements, this case of CO₂ credits is one in which involuntary conversion treatment

may be clearer than like-kind treatment. In the case of a trader, the involuntary provision rules will not apply, as noted in Revenue Procedure 92-91, for traders of SO₂ credits. If, in the future, U.S. taxpayers are required to use CO₂ credits to offset their emissions, then involuntary conversion rules should be applicable.

Question seven: penalties paid. The EPA can impose fines for noncompliance with the Clean Air Act. In the case of SO₂ credits, the monetary penalty is punitive and therefore not deductible. The reduction of future emissions allowances imposed on the taxpayer, however, is not considered such a penalty. Currently, these issues do not exist in the United States for CO₂ credits.

Question eight: traders and investors. Revenue Procedure 92-91 describes the tax consequences for traders and investors in SO₂ credits. They are generally the same as for entities that are not traders or investors, with the exception of depreciation, involuntary conversion, and penalties, which do not apply to traders and investors. The issues affecting traders have been detailed in the discussion above.

credits are traded but not used by taxpayers, which should lead to capital treatment. If the United States adopts a cap and trade system in the future, the nature of the asset to users of the credits will not be as clear.

Guidance from the IRS in these ambiguous areas for users and traders of CO₂ credits would clarify the extent to which the rules of Revenue Procedure 92-91 may be applied in these cases. □

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Guidance from the IRS for users and traders of CO₂ credits would clarify the extent to which the rules of Revenue Procedure 92-91 may be applied.

CO₂ Credit Concerns and Future Regulation

A comparison of CO₂ credits with SO₂ credits reveals significant similarities and differences that may affect the tax treatment of CO₂ credits. As noted above, many issues related to CO₂ credits should be reportable in a manner similar to SO₂ credits. There are, however, some issues for CO₂ credits that may not be easily explained by the SO₂ credit guidance. In terms of these differences, there are several key concerns:

- Is IRC section 1031 nonrecognition treatment for like-kind exchanges applicable in the case of CO₂ credits?
- Will there be a provision for recording depreciation in cases involving credits with a definite useful life?
- What constitutes a “trader” (i.e., frequency of trades, monetary amount of trades)? Is there a frequency threshold of trading that affects tax treatment, or is the treatment entirely based on intent?
- In the case of credits expiring prior to their use, is this event treated as an ordinary or capital loss? The guidance for SO₂ credits indicates that they are generally capital in nature. Currently, CO₂