

*A climate for change?*

Understanding the tax implications  
of U.S. greenhouse gas regulation



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# Overview

A number of domestic and international considerations have led many political observers to conclude that the United States will take legislative action in the remainder of 2009 or in 2010 to address climate change. The goal of these legislative efforts is to achieve a gradual but significant reduction in greenhouse gas (GHG) emissions from their earlier levels by the middle of the century. Action in this area would be a watershed regulatory and tax development and would affect all types of businesses in many aspects of their operations. Looking ahead, it would not be surprising to see that climate-change regulation, in terms of its business impact, comes to be regarded as in a class with securities regulation, food and drug safety regulation, financial services regulation, or employee retirement income security rules. Therefore, this legislation will present an array of risks and opportunities that will demand attention from boards of directors, senior management, and tax departments.

This paper describes general approaches to climate-change legislation and the resulting implications for tax policy. Following the discussion of political and business considerations driving legislative action, we focus on the largest component of the currently prevailing legislative approaches to climate change: a “cap-and-trade” program. Cap-and-trade systems seek to reduce GHG emissions by setting strict limits on the amount of GHGs that can

be emitted under an allowance system and permitting the sale and purchase of allowances. This discussion also includes a description of those GHGs that are commonly suggested for regulation under a cap-and-trade system. Congress also can be expected to provide tax incentives for the development of renewable and alternative energy technologies, impose regulatory mandates with respect to efficiency or the mix of energy sources relied upon by utilities, and direct funding of research designed to reduce GHG emissions. These latter components of potential climate-change legislation are beyond the scope of this paper.

After laying the groundwork for understanding cap and trade, we turn to the role of taxes in efforts to directly limit GHG emissions. We begin by describing the debate that continues between advocates of a cap-and-trade approach and those who, as an alternative, would favor a tax on GHGs. Following this discussion, we summarize the tax issues that will confront businesses if Congress adopts a cap-and-trade system, which will necessarily create new intangible assets worth hundreds of billions of dollars. Without further guidance, there will be significant uncertainty regarding the tax treatment of assets, liabilities, and transactions arising as a result of cap and trade.

# The growing call for action

During the 2008 presidential campaign, both candidates broadly supported reduction of GHG emissions through a cap-and-trade system. Since he took office, President Obama and the Democratic leadership in Congress have made reducing greenhouse gas emissions and transitioning the United States to a clean energy economy a top domestic priority. If this effort is successful, the United States will join a variety of global, national, and regional efforts to reduce and mitigate GHG emissions that have been implemented since the 1992 United Nations Framework Convention on Climate Change (UNFCCC).

Although it is one of the most significant emitters of greenhouse gases,<sup>1</sup> the United States did not ratify the Kyoto Protocol – the first international agreement to place mandatory limits on greenhouse gas emissions – which was signed in 1997. A number of individual U.S. states, however, have entered into regional compacts or taken other actions. The next UNFCCC meeting – scheduled to take place in Copenhagen, Denmark, from December 7-18, 2009 – is expected to address the development of a new, stricter international agreement on climate change to replace the Kyoto Protocol.

Many in the international community anticipate that the United States will play a more active role at the upcoming meeting of the UNFCCC. In addition, domestic proponents of climate-change action find themselves under pressure to act on pending cap-and-trade legislation before negotiations begin in Copenhagen.

At the same time, various opponents of current action on GHG emissions have presented three arguments against moving on climate-change legislation in the near term. First, they assert that the necessity for immediate action has not been proven scientifically. Second, they express concern that because other nations have not taken action to limit their emissions, adopting limits in the United States would risk destroying the U.S.'s ability to compete in the global economy. Finally, they argue that GHG restrictions would place a disproportionate burden on low- and middle-income families.

Advocates of GHG reduction recognize that such reduction would increase the cost of energy and energy-intensive goods and services. Lower- and middle-income individuals and families spend a larger share of their income on goods and services that would be affected by price increases associated with restrictions on GHGs than do high-income individuals. These concerns have led to the consideration of a number of additional policies, ranging from direct relief to families through the tax system to the provision of free allowances to government or other entities working to mitigate the impact on the poor.

Some supporters of GHG regulation have also raised questions about the timing for current action, fearing that implementing an emissions program during the current economic recession would increase inflationary pressures or slow recovery.

<sup>1</sup> The U.S. Department of Energy projects that the United States will account for roughly 20 percent of global greenhouse gas emissions in 2010. See Energy Information Administration, *Emissions of Greenhouse Gases in the United States, 2007*. U.S. Department of Energy, December 2008.

# Operation of a cap-and-trade system

On June 26, 2009, the House of Representatives passed comprehensive climate-change legislation (H.R. 2454) that would implement a cap-and-trade program to reduce GHG emissions to 97 percent of 2005 levels by 2012, 83 percent by 2020, 58 percent by 2030, and 17 percent by 2050. The Senate, although moving at a slower pace, has begun working on its own climate-change legislation, which currently is expected to follow the general approach of the House bill while differing in a number of key areas.

As demonstrated by recent congressional debates, the politics of climate change are contentious, and there is strong disagreement about the desirability and effectiveness of the various policy options. Congress must first agree on the regulatory mechanism. Although it is not clear whether or the extent to which the structure in the House-passed bill will be the approach that emerges in the final legislation, the House-passed bill provides a useful platform from which to discuss a range of significant issues.

## GHGs subject to an emissions cap

The House-passed legislation identifies seven GHGs subject to a cap on emissions and a trading regimen. These include carbon dioxide, methane, nitrous oxide, sulfur hexafluoride, perfluorocarbons (PFCs), nitrogen trifluoride, and hydrofluorocarbons (HFCs). The Kyoto Protocol regulates all of these gases except for nitrogen trifluoride.

Although the principal greenhouse gas, carbon dioxide, results primarily from the combustion of fossil fuels, the others occur in a variety of settings, which are summarized on p.7. The legislation also directs the Environmental Protection Agency (EPA) to designate any other anthropogenic gas as a covered GHG if its global warming potential meets or exceeds a prescribed threshold. The bill requires the EPA to establish a federal greenhouse gas registry and comprehensive reporting system for greenhouse gas emissions. The bill would also establish a process for interested parties to petition the EPA to add a gas to the GHG registry.

Other legislation in the 111th Congress does not include as comprehensive a list of GHGs as does the House-passed bill. For example, four of the six major climate-change bills introduced in 2009 cover only carbon dioxide, the largest single GHG. The European Union's initial approach in its Emission Trading System (ETS) regulated only carbon dioxide and only in certain industries; regulation of other gases and industries will phase in beginning in 2013. Because of its expanded coverage of GHGs, H.R. 2454 would subject roughly 7,400 facilities to its regulatory requirements if enacted, according to the Congressional Budget Office.

Many companies would be affected by the price impacts of the cap-and-trade regime. The discussion below describes the point at which regulation under the bill would attach. This "attachment" of regulation varies based on the entity and the type of GHG or the type of fuel that produces a GHG.

## Covered entities

Any cap-and-trade system would require "covered entities"<sup>2</sup> to hold emission allowances or offset credits<sup>3</sup> (discussed below) for the GHGs those entities produce or emit. Exactly when an entity would have to begin holding emission allowances and the specific gases for which it must hold allowances would be determined based on entity type.

The definition of covered entities necessarily will reflect environmental, economic, and political considerations. The House-passed bill illustrates the range of factors that can be incorporated in such a definition. In that bill, covered entities include electricity sources, industrial production sources, and geological sequestration sites. Some industrial sources would be covered entities if they produce or emit a threshold of 25,000 tons or more of carbon dioxide equivalent in 2008 or any subsequent year; other industrial sources, such as cement production, lime manufacturing,

<sup>2</sup> Depending on the system, a covered entity could be called a facility or an installation (such as in the United Kingdom).

<sup>3</sup> Offset credits are issued for qualified emissions reductions achieved through offset projects.



and petroleum refining, would be covered entities regardless of the level of emissions<sup>4</sup>. Certain nonindustrial sources, such as landfills and agricultural operations, are not included in the definition of covered entities.

The breadth of change involved in a cap-and-trade system will necessitate a transition period. For example, in the House-passed bill, the phase-in of the cap-and-trade system would begin in calendar year 2012 for some covered entities, like electricity generators, large fuel producers and importers, and certain industrial sources. Other covered industrial sources would be required to hold allowances beginning in 2014. Natural gas distributors

that deliver at least 460 million cubic feet of natural gas to customers that are not covered by the other provisions would, beginning in calendar year 2016, have to hold allowances based on the amount of emissions attributable to the volume of gas delivered.

Further, the type of fuel combusted or the gas emitted will also determine whether the covered entity has to hold an emission allowance. For some fuels, allowances would have to be held for the carbon dioxide equivalent of the fuel's combustion, even though the covered entity having to hold the allowance is not the entity burning the fuel.

For example, under the House-passed legislation, an electricity generator would have to begin holding allowances in 2012. However, the generator would not have to hold allowances for emissions resulting from the combustion of petroleum-based or coal-based liquid fuel, natural gas liquid, renewable biomass, petroleum coke, or any fluorinated gas (except for nitrogen trifluoride) purchased for use by that generator. In other words, a power plant burning solid coal would have to hold emissions allowances, but a plant burning oil or liquid coal would not. Allowances for the excepted fuels normally would attach elsewhere in the supply chain, such as at the refiner or importer.

<sup>4</sup>Under the House-passed bill, certain HFCs are subject to a separate cap-and-trade system that requires distinct allowances to be held by producers of the HFCs or importers of products containing these HFCs.

### Greenhouse gases

Carbon dioxide accounts for roughly 85 percent of all GHG emissions in the United States and is significant because it is emitted by so many sources. It is predominantly emitted from the combustion of fossil fuels including coal, oil, and gas products in power generation, heating and cooling of structures, transportation of goods and people, and industrial processes. Other notable activities that result in the emission of carbon dioxide include carbonating beverages, freezing food, producing cement, and making dry ice. It is also used to neutralize industrial and municipal wastewater, and as a shielding gas during welding.

Methane makes up just over 8 percent of all GHG emissions. Sources of methane include landfills, natural gas systems, coal mining, and livestock fermentation. The largest human-related source of methane (34 percent of total methane emissions) is landfills.

Nitrous oxide makes up 4.4 percent of all GHG emissions. The significant human-related sources of nitrous oxide include agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic acid production, and nitric acid production. Nitrous oxide is predominantly used as a supplemental anesthetic. It is also used in the food industry as an aerosol spray propellant for whipped cream canisters and cooking sprays.

Sulfur hexafluoride, PFCs, nitrogen trifluoride, and HFCs combined contribute just over 2 percent of all GHG emissions, but their carbon dioxide equivalencies are very high.

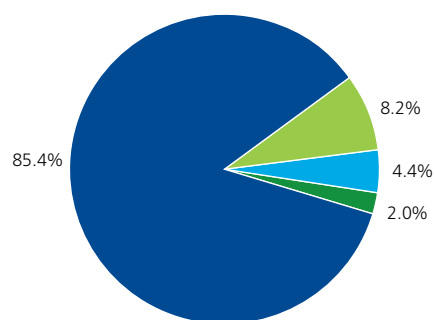
Sulfur hexafluoride is commonly used as an insulator in electrical equipment. It is leaked into the air when equipment becomes old or damaged. The gas is also widely used in circuit breakers, gas-insulated substations, and switchgear. Additionally, sulfur hexafluoride is used as the pressurized bubble in certain sealed-cell 'air' athletic shoes.

Perfluorocarbons are mostly used in aluminum production and semiconductor manufacturing. The physical properties of PFCs have been found to be beneficial in the medical industry, especially in eye surgeries. PFCs are also used to sterilize surgical equipment through steaming, and are widely used in medical diagnostics including magnetic resonance imaging and ultrasonic imaging.

Nitrogen trifluoride is used in chemical laser applications and the electronics industry.

Hydrofluorocarbons are man-made specialty gases developed as an alternative to chlorofluorocarbons, which were blacklisted internationally because of their ozone-damaging tendencies. A type of HFC is used in refrigeration and air-conditioning systems as well as in insulating foams, fire suppression, solvent cleaning, and aerosol propellants.

Figure 1. Composition of greenhouse gas emissions



■ Carbon dioxide ■ Methane  
■ Nitrous oxide ■ Sulfur hexafluoride, HFCs and PFCs

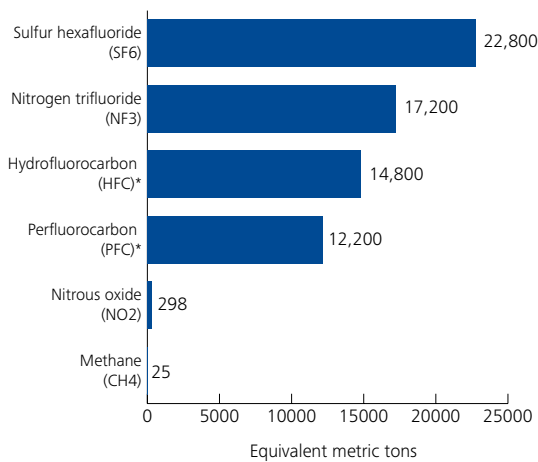
EPA 2009 Greenhouse Gas Inventory Report

Emissions from the final regulated gas, nitrogen trifluoride, are negligible.

### Allowance system operation

A cap-and-trade system uses allowances to regulate the production or emission of greenhouse gases. Under the House-passed bill, for example, allowances for emissions in a calendar year would have to be obtained (whether by grant, purchase, or exchange) and held by April 1 of the subsequent year. Each emissions allowance gives a covered entity the right to emit, or have attributable greenhouse gas emissions, in an amount of one ton of carbon dioxide equivalent. The House-passed bill contains a chart that sets forth the carbon dioxide equivalent of each gas according to its relative potential effect on global warming. For example, methane's carbon dioxide equivalency is 25 metric tons, which means that an affected entity would need 25 emission allowances for each ton of methane subject to allowance requirements.

Figure 2. Carbon dioxide equivalents



Note: Amounts above demonstrate the equivalent metric tons of carbon dioxide emitted for every metric ton emitted of the gas identified.

Source: H.R. 2454, section 311 (proposed new section 712 to the Clean Air Act)

\* Equivalencies vary depending on type of HFC or PFC

Although President Obama in his fiscal 2010 budget package proposed a government auction of all GHG allowances, a number of considerations are leading Congress in the direction of distributing a substantial

percentage of allowances for free. For example, in the House-passed legislation, over 80 percent of allowances would be distributed to select recipients in 2012, the first year of the program. Remaining unallocated allowances each year would be auctioned quarterly by the EPA.

In determining how allowances that are not auctioned should be distributed, Congress is likely to consider a number of factors. Some allowances may be allocated to governmental and nongovernmental entities that will in turn sell these allowances to covered entities that require allowances. The resulting revenue would be used to support a variety of programs ranging from research intended to result in reduced GHG emissions, to programs to cushion the impact of increasing fossil fuel costs on lower-income individuals. Additional allowances may be granted to power-generating or local distribution companies either to ease the transition to cap and trade or to cushion the impact of higher energy costs to consumers. Some allowances may be granted to industries that Congress believes are subject to an especially significant competitive risk as GHG regulation is imposed. Finally, allowances could be allocated to other existing covered entities in order to ease the transition into the cap-and-trade system.

The number of allowances, both free and auctioned, will change over time. Most significantly, in order to meet overall GHG reductions, the total number of allowances would shrink dramatically by mid-century. The mix of free and auctioned allowances may change, as well as the allocations of free allowances among designated recipients. Finally, the EPA will likely have the ability to inject additional allowances into the system from a strategic reserve.

If Congress adopts a cap-and-trade program such as the one in the House bill, then the following attributes of the cap-and-trade system would affect the tax treatment of allowances:

- Most allowances would be initially allocated to emitters for free, but some would be sold at auction;
- EPA-approved domestic and international offset credits could be used to satisfy a portion of an emitter's allowance requirement;

- To a limited extent, international allowances could be used in lieu of domestic allowances;
- Allowances could be purchased, sold, transferred, or held without restriction;
- Allowances could be banked and used in future years;
- Allowances could be borrowed from future years;
- Emitters would be penalized for excess emissions;
- The EPA could set an expiration date for allowances (domestic and international) and offset credits, if it determines that expiration is necessary to preserve the integrity of the allowances, offset credits, or allowance tracking system.

As noted, opponents believe that GHG regulation may place U.S.-based businesses at a significant competitive disadvantage. This concern, which centers on the prospect of major manufacturing countries failing to adopt stringent emissions constraints, is shared by many proponents of regulation. The House bill addresses this issue through provisions that are intended to prevent an increase in GHG emissions by industrial entities in other countries as a result of cost-of-production increases in the United States under the proposed cap-and-trade program.

The bill would offer allowance rebates to eligible industry sectors based on an assessment of greenhouse gas intensity, trade intensity, and high-energy intensity. Companies that manufacture in countries with more lenient climate-change standards would be required to submit allowances before importing products into the United States.

Following passage of the House bill, the Obama administration and others expressed opposition to including such trade provisions on the grounds that they would potentially violate international trade agreements, would be perceived as protectionist, and would hamper the global trade necessary to a global economic recovery.

### Offset credits

In addition to requiring allowances, a cap-and-trade system may also be designed to permit covered entities to meet their greenhouse gas emissions reduction requirements by holding offset credits. Offset credits would be issued for verified projects that result in a measurable reduction, avoidance, or sequestration of GHG emissions from a source that is not already covered by the cap-and-trade system itself.<sup>5</sup>

Potential offset projects likely would fall into three general categories:

- Biologic sequestration through agriculture, land use, and forestry projects;
- Renewable energy or energy-efficiency projects; and
- Technology to support the reduction or control of non-carbon dioxide GHG emissions from sources such as industrial or manufacturing processes, landfills, and coal mines.

In addition to limiting offset projects by type, policymakers may also choose to limit them by location and may or may not allow credits for offset projects that are undertaken outside the United States.

Under the House-passed bill, the EPA would determine eligible domestic and international offset projects based on a handful of broad requirements that are consistent with issues commonly raised in the academic and policy literature. These include requirements that offset projects be verifiable; result in emissions reductions above and beyond what would have been expected in the ordinary course of business; account for and mitigate leakage; and, in the case of sequestration projects, only be granted for reductions that are permanent. Eligible offset projects would generate an emission credit equivalent to an emission allowance, and these offset credits could be sold or traded. The House-passed bill requires that offset credits be verified by a third party.

<sup>5</sup> Jonathan L. Ramseur, "The Role of Offsets in a Greenhouse Gas Emissions Cap-and-Trade Program: Potential Benefits and Concerns," *CRS Report RL34436*, May 18, 2009.

# Tax policy and GHG reduction

As suggested by the House's passage of its climate-change bill in June, a cap-and-trade approach to emission reduction is currently the leading policy option for GHG reduction under discussion in Washington. The prospect that Congress will adopt a cap-and-trade system raises two distinct tax-related issues. The first is whether a tax designed to discourage activities that result in GHG emissions would be more desirable than a regulatory approach. The second is whether the tax treatment of various assets, liabilities, and transactions arising under the cap-and-trade system is sufficiently delineated.

## Cap and trade vs. a carbon tax

Cap and trade is only one of two GHG solutions commonly discussed in both academic literature and in policy debates. Some have suggested a carbon tax as an alternative to a cap-and-trade system. Such a tax would seek to reduce emissions by placing a direct tax on the production, distribution, or emission of carbon and possibly other GHGs. This could be done at the same points at which a cap-and-trade program would require allowances. In theory, a GHG tax could be designed to achieve the same results as the granting of free allowances and offset credits by providing tradable GHG tax exemptions. To achieve the desired GHG reductions under such a system, the actual tax on GHG emissions for which no tax exemptions were available would have to be set at a level sufficient to make excess emissions more costly than mitigation strategies.

Economists, business leaders, environmentalists, and others who support action to curb GHGs have strongly held views as to whether a cap-and-trade system or a tax system should be adopted.

There are a number of key tradeoffs between a cap-and-trade system and a carbon tax.

Proponents of cap and trade argue that:

- The cap feature of cap and trade is necessary to provide certainty in GHG reductions;
- Cap and trade allows businesses to plan for GHG reductions by setting definitive measures of available future allowances;

- Cap and trade is a proven system that has worked well in Europe after initial implementation challenges and in the United States with respect to sulfur dioxide and nitrogen oxide emissions;
- A U.S. cap-and-trade program would support a global GHG solution by integrating well with existing or proposed state, regional, or provincial programs in the United States and Canada; initiatives in the EU (ETS), Australia, New Zealand, and Japan; and the approach adopted under the Kyoto Protocol; and
- As a market-driven process, cap and trade encourages pursuit of the lowest price of abatement options.

Proponents of a GHG tax dispute these arguments. First, they argue that while a cap system can provide environmental certainty, the cost of future allowances is unpredictable, and the European experience demonstrates that both the costs of compliance and the price of allowances can fluctuate dramatically. Second, they assert that administration of emissions permits will create an instant market that will require a significant investment of new government resources for administration, regulation, and enforcement.

In support of their approach, proponents of a GHG tax argue that:

- A tax is more transparent;
- Implementation, oversight, and enforcement of a tax can be accomplished through existing governmental structures (largely the IRS);
- A tax regimen would create cost certainty for businesses and consumers, and revenue certainty for policymakers; and
- A tax inherently is more flexible if economic circumstances or environmental considerations require changes in policy.

Proponents of cap and trade counter that a GHG tax cannot lead to certainty in the future level of emissions because it is difficult to link a tax rate per ton of emissions to a specific level of emission reductions. They also express concern that the politics of tax increases would make any required future increase in the tax difficult to achieve.

### Tax issues in a cap-and-trade regime

The Congressional Budget Office estimates that the House-passed cap-and-trade legislation would create \$989 billion worth of allowances over nine years. Many expect that there will be an effort in the Senate to lower the emission reduction targets in the House bill; nonetheless, a substantial dollar value of allowances would be created by any GHG cap-and-trade program. Taxpayers receiving, purchasing, holding, using, or selling assets from this substantial pool of newly created assets will be keenly interested in how they are treated both for federal income tax purposes and under state and local tax rules. Similarly, once an offset credit has been created and acquired by another entity, it will function in the same manner as an allowance and reasonably can be expected to be governed by the same tax rules. As described below, some additional issues arise in connection with the creation of offset credits or cross-border transactions involving offset credits.

The IRS has issued some potentially relevant guidance (Rev. Proc. 92-91, 1992-2 C.B. 503, and Rev. Rul. 92-16, 1992-1 C.B. 15) in addressing the tax treatment of sulfur dioxide and nitrogen oxide emissions allowances under the Clean Air Act of 1990. This guidance reflects the conclusions of the IRS National Office with respect to the specific items addressed in the guidance but does not have the force and effect of Treasury regulations. Some of the Service's conclusions are considered in the discussion that follows.

As of early September 2009, Congress had not expressed in any concrete way its views on the tax treatment of allowances, offset production, and offset credits under a cap-and-trade program. However, statements at a June 16, 2009, Senate Finance Committee hearing suggested that taxpayers should not simply assume that the existing guidance on sulfur dioxide and nitrogen oxide will apply.

For example, Finance Committee Chairman Max Baucus, D-Mont., noted in his opening statement that: "It may be appropriate to adopt some past practices on tax treatment of allowances. But the scope of the Clean Air Act Amendments is much smaller than legislation to cut carbon emissions. For example, the acid rain program applied to fewer than 120 facilities nationwide. Cap and trade will apply to over 7,000 entities. Moreover, the law has changed since 1992. Congress has enacted major tax legislation, including legislation affecting the amortization of intangible assets, since Treasury issued its 1992 guidance."

In a report prepared for the hearing,<sup>6</sup> the staff of the Joint Committee on Taxation (JCT) analyzed the existing rules and the issues presented by a cap-and-trade system. The discussion that follows provides an overview of those rules and issues, and highlights the principal areas of uncertainty that taxpayers may face under a GHG program.

**The receipt of an allocated allowance** – Perhaps the most critical and broadly applicable issue is the tax treatment of allowances that may be received as free allowances under the program. The JCT identified three possible treatments:

- *The value of allocated allowances could be included in income by the recipient when they are received.* The JCT characterized this treatment as "consistent with the general rule under present law, which provides that gross income includes income from whatever source derived and defines income as any accession to wealth." Were income to be recognized upon the receipt of allowances, a taxpayer's basis in those allowances would be increased by the amount of income recognized.
- *Income could be recognized by the recipient, and its basis in the allowances increased, in the year they are available to be surrendered for the right to emit.* The JCT characterized this approach as "inconsistent with the expectation that the allowances will have a determinable value from the time of allocation, even if they can be used only in a future year," but noted that the approach

<sup>6</sup> Joint Committee on Taxation, *Climate Change Legislation: Tax Considerations* (JCX-29-09), June 12, 2009, p. 5

would avoid potential cash-flow issues for the recipients if the allowances are not surrendered until a subsequent year.

- *The value of granted allowances could be excluded from income of the recipient unless they are sold.* This treatment would be consistent with the holding of Rev. Rul. 92-16. Under this approach, the taxpayer would have a zero basis in the allowance (apart from any transaction costs). If the allowance is surrendered, the taxpayer would not have a deduction; if it is sold, the taxpayer would recognize gain.

**Basis recovery of allowances and offset credits** – The JCT identified five different potential characterizations of allowances that would determine the manner in which a taxpayer could recover its basis in the allowances: (1) inventory, (2) materials or supplies, (3) ordinary and necessary business expenses (other than supplies), (4) amortizable intangible property, or (5) nonamortizable intangible property.

For taxpayers holding allowances for surrender in the course of their business, these possibilities create significant uncertainty as to when and how the basis of allowances may be recovered. The JCT suggested that, under present law, taxpayers holding allowances for surrender or investment could not properly account for them as inventory, nor could they treat them as materials or supplies, because allowances would not be tangible property.

Treating allowances as an ordinary and necessary business expense deductible in the taxable year such allowances would be taken into account under the taxpayer's normal method of accounting typically would result in a deduction when the obligation to surrender allowances becomes fixed and determinable or when allowances are surrendered. Of course, under this approach, the basis in allowances surrendered would be capitalized if treated as a production cost of inventory or certain self-constructed property.

In Rev. Proc. 92-91, the IRS ruled that emission allowances for sulfur dioxide and nitrogen oxide are nonamortizable intangible property. Under this view, the basis of GHG generally would be recovered upon surrender or sale.

Alternatively, allowances could be characterized as amortizable intangibles. In that case, basis would be recovered either over the useful life (or other measure) of the intangible or under the 15-year amortization rules applied to acquired intangibles.

Offset activities and offset credits will present additional specific tax issues. The tax treatment of activities and costs associated with creating offset credits will depend on a variety of considerations. Under present law, these include:

- Whether the taxpayer is creating offset credits for sale to others or for its own benefit and
- Whether creating the offset credits is the primary objective of the project (as may be the case in reforestation) or an additional benefit of a larger project (such as methane collection and combustion).

Generally, a taxpayer that produces property primarily for sale must capitalize both direct and facilitative costs incurred in creating the property. In case of offset credits, facilitative costs could include costs incurred in measuring, monitoring, and verifying reduced, avoided, or sequestered emissions, and costs to obtain certification.

When a taxpayer creates an asset for use in its own trade or business, present law generally requires that the direct and facilitative costs of the project be capitalized and recovered through depreciation or amortization. Application of these present-law rules could result in a mismatching of the income that results from emissions for which offset credits are surrendered and the recovery of the cost incurred in the offset project that generated those credits.

If the production of offsets is in connection with a project that has another primary purpose, then, under existing law, the taxpayer could be required to allocate its production costs between the offset activities and its other products.

**Sale and exchange of allowances or offset credits –**

The initial characterization of allowances and offset credits may also influence the treatment of income received from the sale or exchange of allowances or offset credits. Generally, GHG allowances would be capital assets unless they were (1) inventory, stock in trade, or property held primarily for sale to customers in the ordinary course of the taxpayer's trade or business, or (2) business supplies. Thus, except for dealers in allowances (or derivatives thereof), gain or loss from the sale of an allowance generally would be treated as capital. An allowance held primarily for sale to customers in the ordinary course of a trade or business of dealing in allowances would generate ordinary income or loss in a taxable disposition.

The JCT has suggested that for purposes of the rules providing for nonrecognition of gain in like-kind exchanges, allowances would generally be like-kind property regardless of the year to which they are allocated. Thus, the basis for the allowance transferred and the allowance received would be the same. It is unclear, however, whether the IRS would consider a transaction in which a carbon emission allowance is exchanged for a sulfur emission allowance to be a like-kind-exchange, whether an international offset and a U.S. offset could be exchanged as like-kind property, and whether offset credits and allowances could be like-kind property.

**Banking of allowances and offset credits –** Business decisions around the banking or borrowing of allowances and offset credits will be influenced by the tax rules adopted for the recognition of income and basis recovery. If a taxpayer holds a zero basis allowance because income was not recognized upon its receipt, then income will be realized upon sale of the allowance. All other things being equal, this would tend to encourage banking of the allowance. Conversely, if the taxpayer has recognized income or given value for an allowance or offset, its sale would not result in taxable income to the extent of the

taxpayer's basis. This would tend to reduce impediments to trading. Were allowances and offset credits to be treated as amortizable intangibles, however, the availability of cost recovery with respect to banked allowances, and the recapture of prior amortization would tend to encourage banking of the allowances.

**International tax issues –** The purchase and trade of emissions allowances or offset credits as a trader or investor would create an additional set of issues when done in an international business context. For example, if a U.S.-owned foreign corporation were to purchase and sell emissions, then whether the resultant income were subject to U.S. anti-deferral rules would depend, among other factors, on the characterization of the sales income for subpart F purposes. Current regulations impose stringent requirements on those assets that qualify for exception to subpart F income.

Conversely, if a foreign-owned company (not otherwise doing business in the United States) were to engage in trading emissions allowances and offset credits in the United States, an issue could arise as to whether the existing tax rules regarding taxation of non-U.S. corporations would allow the firm to avoid having a U.S. trade or business.

If a foreign company were to produce offsets in the United States, an issue would arise as to whether that firm's actions constitute the conduct of an active trade or business and give rise to effectively connected income from such activities. If the firm were eligible for treaty benefits, the further question would arise as to whether offset-related income is subject to taxation if attributable to a permanent establishment.

Finally, as offset credits and allowances are transferred among related parties or activities are undertaken on behalf of related parties, the U.S. tax characterization of these transactions involving foreign subsidiaries as well as the transfer pricing for such transactions would have to be considered.

**Exempt organization issues** – Offset credits will also likely raise tax issues for tax-exempt organizations, such as conservation organizations, whose activities may create offsets – for example, purchasing undeveloped land and protecting it. It is unclear whether or when the sale of resultant offset credits by an exempt organization would give rise to unrelated business taxable income and where under the current regulations the sale of offset credits would fall in determining whether an organization’s activities are substantially related to its exempt purpose.

**Penalty for excess emissions** – Cap-and-trade systems typically impose significant civil penalties on emissions not offset by allowances or credits. Under existing law, a fine or similar penalty may not be deducted. This denial applies to, among other things, any amount paid as a civil penalty imposed by federal, state, or local law, as well as any amount paid in settlement of the taxpayer’s actual or potential liability for a fine or penalty (civil or criminal). The penalties imposed under the cap-and-trade program would fall within these rules.

In the past, controversy has arisen in the application of these rules (1) when taxpayers take the position that a payment under a settlement agreement that does not specifically admit liability for wrongdoing is deductible and (2) when enforcement agencies accept or require certain actions to be taken by the taxpayer, instead of imposing a full penalty. Absent specific legislative clarification, similar controversies could arise under the cap-and-trade program.

**State tax issues** – A federal cap-and-trade program raises myriad issues at the state and local levels, the complexity of which may depend on how closely a particular state follows federal law. For example, the receipt of a free allowance may be treated as income for state tax purposes even if it is not for federal tax purposes.

Additionally, carbon-intensive businesses or others that deal in large volumes of GHG allowances or offset credits for investment or trade will have to think about apportionment issues at the state level. Such activities would give rise to “gross versus net” issues. Presumably, receipts from carbon trading would be sourced as an intangible to the state where the greatest cost of performance occurs, or would be subject to market-based sourcing in some states. At first blush, GHG allowances or offset credits would be excluded from the property factor, except for certain industries, such as banks and financial institutions, which are already required to include intangibles in the property factor.

A cap-and-trade program also could impact a company’s property tax liability, depending on how the business is assessed.

# Conclusion



Any broad effort by the federal government to dramatically reduce GHG emissions will create extraordinary regulatory and tax change to which businesses and consumers will have to adjust. Many business and political leaders now assume that action on carbon and other greenhouse gases is inevitable in the near future. This perspective is reinforced by the fact that the EPA has taken initial steps toward regulation of carbon dioxide emissions. Although the precise content and timing of climate-change legislation is still unclear, the business implications are wide ranging and will demand early consideration.

As businesses confront this new reality, an array of risks and opportunities will demand attention from boards of directors, senior management, and operating units. These risks and opportunities will vary across industry sectors and with the competitive landscape that a particular company faces.

For senior tax officers, a cap-and-trade system is likely to create new uncertainties as to the tax treatment of many aspects of the regime in the absence of prompt guidance. Nevertheless, tax departments should begin to consider the tax data collection requirements of a cap-and-trade system and the supporting systems necessary for tax compliance, reporting, and planning, as well as the options for tax treatment in the absence of guidance. At the same time, it will require effective communications between the tax department and operating units that may not immediately recognize the tax consequences of business decisions they make regarding allowances and offsets, investments in mitigation, or changes to the supply chain to mitigate increasing costs.

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