CONGRESSIONAL BUDGET OFFICE
U.S. Congress
Washington, DC 20515

Douglas W. Elmendorf, Director

September 29, 2011

Honorable Maria Cantwell
United States Senate
Washington, DC 20510

Dear Senator:

This letter responds to your request for information about the methodology the Congressional Budget Office (CBO) would use to estimate the budgetary impact of a bill similar to S. 2877, the Carbon Limits and Energy for America's Renewal (CLEAR) Act, which was introduced in the 111th Congress. In particular, you asked about how CBO would apply the "revenue offset" to the estimate of net revenues that would result from enacting the bill. Although CBO did not prepare a cost estimate for S. 2877, we can provide some general information about how the agency has projected the budgetary impact of similar legislation that would limit the emission of greenhouse gases through the issuance of tradable allowances or permits.[1]

Budgetary Treatment of Proceeds from Auctioning Emission Permits

Under the CLEAR Act or similar legislation, the government would collect revenues from auctioning emission permits to companies that would have to comply with a cap on carbon emissions. The cost of purchasing those permits would become an additional business expense for such companies that would reduce taxable income somewhere in the economy. The result would be a loss of government revenue from income and payroll taxes that would partially offset the revenue the government would receive from auctioning the permits. By long-standing convention, CBO would estimate that revenue loss to be 25 percent of the auction revenues.

The 25 percent offset would apply whether the cost of purchasing the permits was borne by a business (including its employees) or passed on to consumers. To see why, consider a company that purchases $100 worth of permits from the federal government:

- If the company could not pass that expense on to its customers, either its profits or the wages it pays to employees, or perhaps both, would decline by a total of $100. On

[1] For more detailed discussions about such estimates, see Congressional Budget Office, letter to the Honorable Joe Barton, about preliminary information on the budgetary impact of distributing carbon emission allowances (May 21, 2009); and letter to the Honorable Henry A. Waxman concerning an assessment of potential budgetary impacts from the introduction of carbon dioxide cap-and-trade policies (May 15, 2009).

average, the tax on additional income (across businesses and households) is roughly 25 percent, so income and payroll tax revenue would fall by about $25. That revenue offset means that the net additional revenues collected under the emission permit system would be $100 minus $25, or $75.

- Alternatively, if the company could pass that expense on to its customers by raising prices, its profits and wages would be unchanged. However, because consumers would spend $100 more on carbon-intensive goods as a result of the higher prices, they would have $100 less to spend on other goods. Consequently, the profits and wages received by producers of those other goods would fall by $100. Again, that drop of $100 in taxable income would reduce the federal government's tax receipts by roughly $25 and thus reduce net additional revenues under the emission permit system to $75.

In your letter you note that CBO has indicated that the actual revenue offset might be less than 25 percent if the expenses were passed on to customers.[2] That statement, however, addresses a situation in which companies pass on the expenses of purchasing emission permits to consumers, and as a result, *the overall price level rises*. In that situation, the federal government would face higher prices for the goods and services it purchases, and the additional cost to the government could be less than 25 percent of the revenues collected under the emission permit system.[3]

However, the underlying assumption—that the overall price level rises—is not the assumption used in estimating the budgetary impact of legislation.[4] Under the estimating conventions adopted by the Budget Committees, when CBO and the Joint Committee on Taxation (JCT) estimate the effect of proposed legislation on revenues and outlays, they generally assume that the legislation would not affect nominal or real (inflation-adjusted) gross domestic product (GDP) and thus that the price level remains fixed.[5] In such a situation, the cost of the emission permits eventually must be reflected as a reduction in profits or in wages, or both, as described in the example above.

More generally, CBO, JCT, and the Treasury's Office of Tax Analysis have adopted the convention of using a single, standard offset of 25 percent when they estimate the budgetary impact of proposed legislation that involves indirect taxes (such as excise taxes or customs duties) or transactions that have economic effects that are similar to those of indirect taxes (such

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[2] See Congressional Budget Office, *The Role of the 25 Percent Offset in Estimating the Budgetary Effects of Legislation* (January 2009), p. 4, footnote 4: "The 25 percent offset is also a bit high if the tax is passed forward in the form of higher prices. The federal share of the economy is closer to 20 percent; the remaining effect on taxes is not quite enough to bring the total offset to 25 percent. Thus, on average, one would expect the offset to be a bit less than in the passed-backward scenario." That conclusion holds less today than it did early in 2009 because the federal share of the economy has risen to about 24 percent.

[3] The federal government would face other costs as well. If the price level rises, the cost of entitlement programs in which benefits are indexed for inflation, such as Social Security, would rise. In addition, because federal income tax brackets also are indexed for inflation, tax revenues would fall.

[4] CBO has, however, used that assumption in analyzing the distributional effects of a carbon cap-and-trade system. See Congressional Budget Office, letter to the Honorable Dave Camp about the estimated costs to households from the cap-and-trade provisions of H.R. 2454 (June 19, 2009).

[5] For an explanation and discussion of those estimating conventions, see Statement of Dan L. Crippen, Director, Congressional Budget Office, before the Subcommittee on Legislative and Budget Process of the House Committee on Rules, *Federal Budget Estimating* (May 9, 2002).

as the sale of emission permits). In doing so, those agencies know that the percentage is approximate and that its adherence to reality in any particular situation depends on features of the tax system that can vary from year to year.

The Effect on Economic Activity

Under the CLEAR Act, most of the proceeds from auctioning emissions permits would be distributed to U.S. legal residents on a per capita basis. Your letter also asks whether CBO would consider the stimulative effects of those nontaxable "dividend" payments on the economy in assessing the budgetary impact of the bill. Again, under the estimating conventions agreed upon by the Budget Committees and followed by the Administration, for purposes of cost estimates used in implementing the Congressional budget process, CBO would assume that the legislation would not affect nominal or real GDP.

In the short term, a policy under which an auction's revenues are "recycled" to households (such as that proposed under the CLEAR Act) would probably have little effect on overall economic activity. An increase in demand for goods and services from the households receiving those payments would be roughly offset by the reduction in the demand for goods and services caused by the expense of purchasing emission permits.

Although not as part of its cost estimates, CBO has analyzed the long-term economic effects of legislation similar to the CLEAR Act that would limit greenhouse gas emissions.[6] The economic impact of a policy to reduce such emissions would depend importantly on the policy's design, but CBO concluded that such a policy would tend to reduce the long-run risks from global climate change, albeit at some cost to economic activity over the long term. The reduction in economic activity would be modest, however, compared with future growth in the economy. The effects on total employment probably also would be small in the long run, although the small effect on overall employment would mask a significant shift in the composition of employment among industries.

When Would the Revenue Offset Not Apply?

You also asked whether modifications to the CLEAR Act's dividend payment provision—to treat the payments as taxable income—would affect CBO's assessment of how the revenue offset would be applied. The answer is yes: If a portion of the revenues generated by the auction of emission permits was returned to households as taxable dividends, CBO would not apply an offset for that portion of revenues.

Continuing the example above, if the government took $100 received from selling emission permits and gave it to a taxable entity in a manner that increased that entity's taxable income, the higher income would generate an estimated $25 in additional tax revenue. The tax receipts gained through that recycling of the auction revenue would equal the $25 tax loss created when companies needed to purchase permits from the government. (Technically, the revenue offset would have an "offsetting offset," so the net change in federal revenues would be the $100 gained from selling the permits).

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[6] See Congressional Budget Office, *The Economic Effects of Legislation to Reduce Greenhouse-Gas Emissions*, (September 2009).

I hope this information is helpful to you. If you have any further questions, I would be happy to discuss them with you. The staff contacts on this subject are Frank Sammartino and Theresa Gullo.

Sincerely,

Douglas W. Elmendorf

Douglas W. Elmendorf
Director

cc: The Honorable Max Baucus
Chairman
Committee on Finance

The Honorable Orrin G. Hatch
Ranking Member