



July 9, 2007

Honorable Jeff Bingaman
Chairman
Committee on Energy and
Natural Resources
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman:

Thank you for your interest in the Congressional Budget Office's (CBO's) April 25 issue brief, *Trade-Offs in Allocating Allowances for CO₂ Emissions*. The brief addressed some of the trade-offs that policymakers could face when deciding how to allocate allowances to emit carbon dioxide (CO₂) under a cap-and-trade program. Specifically, CBO's analysis quantified the near-term changes in gross domestic product that might result under six allocation scenarios and examined how each scenario might affect income for households in different income categories. In your letter of June 29, you asked whether a cap-and-trade program would harm the economy by imposing costs that could not be justified by its benefits and whether such a program would necessarily be regressive, imposing disproportionately high costs on low-income households relative to their income. Those points are addressed below.

Would a Cap-and-Trade Program Harm the Economy? An effort to limit CO₂ emissions in any given year would have two principal effects: It would produce long-term economic benefits (by avoiding damages in the future) but would impose economic costs in each year in which the limit was in effect (by restricting the use of fossil fuels, which emit CO₂ into the atmosphere when they are burned). Although CBO's issue brief acknowledged that reducing CO₂ emissions would create both costs and benefits, it was not intended to quantify those benefits. Rather, the brief explicitly took the goal of reducing emissions as a given and focused on the near-term efficiency and distributional trade-offs associated with doing so under different methods of allocating emission allowances. More specifically, each allocation scenario considered in the brief would reduce CO₂ emissions by the same amount and thus would produce the same long-term benefits, while imposing different near-term costs. Given the narrow objectives of the brief, the fact that it did not explicitly quantify the benefits of a cap-and-trade program should not be interpreted in any way as implying that CBO has concluded that the costs of such a program would outweigh the benefits.

A variety of analyses suggest that a carefully designed program to begin reducing CO₂ emissions would produce greater benefits than costs. In particular, a recent report by the Intergovernmental Panel on Climate Change has brought to light new information about the potential damages that could result from continued increases in those emissions. The magnitude of such damages remains

highly uncertain, but there is growing recognition that some degree of risk exists for the damages to be unexpectedly large, and emissions reductions would help lessen that risk. However, the U.S. economy depends heavily on fossil fuels, and substantially reducing CO₂ emissions (either by decreasing the use of those fuels or by sequestering the emissions that result from them) is likely to be costly and to take several decades. The costs of an effort to lower emissions could be minimized by using economywide incentives (such as a tax on emissions or a cap-and-trade program) and by phasing the policy in gradually so the economy had time to adjust.

Would a Cap-and-Trade Program Be Regressive? A cap-and-trade program for CO₂ emissions need not be regressive; its ultimate distributional effect would depend on policymakers' decisions about how to allocate the emission allowances. The ultimate distributional impact of such a program would be the net effect of two distinct components: the distribution of the costs of the program (including the cost of paying for the allowances) and the distribution of the allowances' value (because someone will pay for them, someone will receive income from them). Market forces would determine who bore the costs of a cap-and-trade program, but (as the April 25 issue brief emphasized) policymakers would determine who received the allowance value. The ultimate effect could be either progressive or regressive. In addition, decisions about how the allowances were allocated could have a significant impact on the overall near-term cost of the policy to the economy.

The following are the key points about distributional and efficiency effects:

- A cap-and-trade program would lead to price increases for energy and energy-intensive goods. Such price increases would occur regardless of whether the government sold the allowances or gave them away, and they would impose a larger burden (relative to income) on low-income households than on high-income households. Those price increases are essential to the success of a cap-and-trade program because they are the most important mechanism through which businesses and households are encouraged to make investments and behavioral changes that reduce CO₂ emissions.
- The policy-induced price increases would reduce demand for energy and energy-intensive goods and services, resulting in losses to some current investors and workers in those sectors (who could see their stock values decline or could face employment risks as jobs in those sectors were reduced). Stock losses would tend to be widely dispersed among investors, because shareholders typically have diversified portfolios. In contrast, the costs borne by existing workers would probably be concentrated on relatively few households, and by extension, their communities.
- The price increases and the potential losses to investors and workers are only part of the story, however. The allowances would be worth tens or hundreds of billions of dollars. Policymakers' decisions about how to allocate them would determine the ultimate distributional impact of the policy, which would reflect both households' losses from price increases, stock declines, and job losses as well as any gains to households from the

allocation method (such as described below). Furthermore, decisions about how to allocate allowances could affect the near-term costs that the program would impose on the economy.

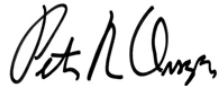
- If they chose to do so, lawmakers could more than offset the price increases experienced by low-income households or the costs imposed on workers in particular sectors of the economy. They could do that by selling some or all of the allowances and using the revenue to compensate specific households or entities. For example, CBO found that lower-income households could be better off as a result of a cap-and-trade program (compared with no program) if the government chose to sell the allowances and used the revenue to pay an equal lump-sum rebate to each household in the United States. In that case, the size of the rebate would be larger than the average increase in low-income households' spending on energy and energy-intensive goods. High-income households would be worse off under that scenario because their average increase in spending would be larger than the rebate.
- By contrast, CBO found that giving all or most of the allowances to energy producers to offset potential losses by investors in those industries—as was done in the cap-and-trade program for sulfur dioxide emissions, which cause acid rain—would exacerbate the regressivity of the price increases. On average, the value of the CO₂ allowances that producers would receive would more than compensate them for any decline in profits caused by a drop in the demand for energy-intensive goods and services. As a result, the companies that received the allowances could experience “windfall” profits. Because those profits would not depend on how much a company produced, however, they would be unlikely to prevent the declines in production and resulting job losses that would stem from the price increases. In addition, those profits would accrue to shareholders, who are primarily from higher-income households, and would more than offset those households' increased spending on energy and energy-intensive goods and services. Low-income households, by contrast, would benefit little if allowances were given to energy producers for free, and they would still bear a disproportionate burden because of price increases. Such an allowance-allocation policy would be “strongly regressive,” in that higher-income households would be better off as a result of the policy and lower-income households would be made worse off.
- Selling emission allowances would allow the government not only to compensate some households for their higher costs or workers for their lost jobs, but also to devote part of the sales revenue to reducing existing taxes that discourage economic activity (such as income or payroll taxes). Those tax reductions, like free allocations to energy producers, would tend to disproportionately benefit higher-income households. However, unlike free allocations, they would reduce the near-term cost that a cap-and-trade program would impose on the economy, perhaps substantially.
- Because giving allowances to energy producers would disproportionately benefit higher-income households and would preclude the possibility of using the allowance value to

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reduce taxes on capital and labor, such a strategy would appear to rate low from both a distributional and an efficiency perspective.

I hope you find this additional information helpful. If you have further questions, please feel free to contact me at 202-226-2700, or your staff may wish to contact Terry Dinan at 202-226-2927.

Sincerely,

A handwritten signature in black ink, appearing to read "Peter R. Orszag". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Peter R. Orszag
Director

cc: Honorable Pete V. Domenici
Ranking Member