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**Testimony of Robert Greenstein,  
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**Hearing on the Tax Aspects of a Cap-and-Trade System  
Senate Committee on Finance  
April 24, 2008**

Strong and effective measures are needed to reduce greenhouse gas emissions and prevent costly and potentially catastrophic environmental and economic damage as a result of climate change. The Center on Budget and Policy Priorities' area of expertise is not in environmental policy per se but in the impacts that climate-change policies can have on the budgets of American families — especially those of modest means — and on the federal budget.

Congress can develop climate-change policy that is environmentally and economically sound and fiscally responsible, treats low-income families equitably, and avoids increases in poverty and hardship. To achieve these objectives, the policy will need to be well designed. This means, in part, that the policy will need to generate sufficient resources to address the requirements and challenges of sound climate-change policy and to mitigate the impact on vulnerable populations, especially people with low incomes. If Congress decides to adopt a cap-and-trade approach, it will be important to auction off most or all of the emission allowances, to devote an adequate share of the proceeds to assisting low- and moderate-income consumers, and to make wise use of the other proceeds. As explained below, this has important implications for tax policy.

My testimony covers the following matters:

- Significant increases in the prices of energy and energy-related products will necessarily occur as a result of the enactment of effective policies to reduce greenhouse gas emissions.
- Households with limited incomes will be affected the most by these higher prices, because they spend a larger fraction of their budgets on energy and energy-related products and because they are less able to afford investments that could reduce their energy consumption (such as a new, more fuel-efficient heating system or car).
- A relatively modest percentage of the total value of the tradable emissions allowances that would be created by a cap-and-trade program — we estimate about 14 percent — would be sufficient to fund a climate rebate program that would preserve the purchasing power of the poorest 20 percent of the U.S. population and provide significant relief to people in the next poorest 20 percent.

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- Making sure that sufficient resources are available to shield low-income households from increased poverty and hardship is a necessary — but not a sufficient — step to avoid increases in poverty. It also is essential to design measures that are effective in actually reaching low-income people, are efficient (with low administrative costs), and are consistent with energy conservation goals.
- The tax system, including the Earned Income Tax Credit, has an important role to play in the design of such policies. For example, a “climate rebate” could be added onto the EITC to help maintain the purchasing power of low-income working families. At the same time, such assistance cannot be provided entirely through the tax system. Many low-income consumers (including low-income elderly individuals, poor individuals with disabilities, and some of the poorest families in the nation) do not fall within the scope of the income tax system and will need to be reached through other means.
- This can be done; policymakers can tap other existing mechanisms to identify eligible low-income households and efficiently deliver a climate rebate to low-income consumers who are not reached by the EITC. As explained below, this can be accomplished efficiently and effectively through the electronic benefit transfer (EBT) systems that state human service agencies already use to provide various types of assistance to millions of poor households.
- The impact of climate-change policies on low-income consumers goes well beyond the direct effect of higher energy prices on their utility bills; more than half of the increased costs that low-income households would face would be for goods and services *other than* utilities. This is one reason that relying on utility companies and expansions in the low-income home energy assistance program as the main ways to deliver low-income relief (an approach some climate-change proposals take) would not be especially effective or efficient, and why a rebate type of approach is more advisable.

In addition to issues relating to low-income consumers, my testimony makes the following points about the allocation of emissions allowances to meet crucial priorities:

- Arguments that a large fraction of the allowances should be given away for free to existing emitters do not stand up to careful analysis. The Congressional Budget Office has estimated that only 15 percent or less of the value of the allowances would be needed to offset the net financial losses that shareholders in companies affected by these policies would otherwise face.
- If most (or all) of the permits were auctioned, Congress would secure sufficient resources to also mitigate impacts on *middle-income* consumers (as well as to address various other important needs related to climate change). Later in this testimony, I describe one promising way to provide relief to middle-income consumers through a new climate-change tax credit. This would be much more effective in protecting middle-income consumers than a reduction in individual income tax rates.
- The higher prices for energy and energy-related products that would result from a cap on emissions would create strong incentives for energy conservation and private-sector investments in clean-energy technologies. Proposals for additional tax incentives (or other federal subsidies) to promote alternative technologies and conservation should be carefully

examined to ensure that resources are used only for cost-effective activities that *would not take place anyway*, in response to the higher energy prices that a cap-and-trade policy will generate.

- I would suggest that the Finance Committee consider asking the Congressional Budget Office or other appropriate entity to undertake a comprehensive review of existing energy tax-incentives and subsidies to determine which incentives and subsidies would no longer be necessary or appropriate under a cap-and-trade regime that leads to higher prices for carbon-intensive energy sources and thus creates market incentives for investing in alternative energy sources and other means of reducing emissions. Under a cap-and-trade system, the private market will provide much more robust incentives for such activities to be undertaken, and preferential tax treatment should no longer be necessary in some cases. Eliminating current incentives that would be wasteful or redundant under a cap-and-trade system could free up resources to fund a substantial fraction of worthwhile *new* investment and conservation incentives that would complement the cap-and-trade program's price signals.

The remainder of my testimony elaborates on these points.

#### **Four Key Numbers on Climate Policy, Low-Income Consumers, and the Budget**

Much of our analysis of the effects of climate-change policy on the budgets of low-income households and the federal budget can be summed up in four key sets of numbers.

##### **1. \$750 - \$950 per year: the average increase in energy-related costs for the poorest fifth of the population that would result from a modest (15 percent) emissions reduction**

Effective climate-change policies work in part by raising the prices of fossil-fuel energy products to encourage energy efficiency and the substitution of clean energy sources. This is essential to prevent extensive environmental and economic damage as a result of global warming. However, this will raise costs to consumers for a wide array of products and services, from gasoline and electricity to food, mass transit, and other products or services with significant energy inputs.

Households with limited incomes will be affected the most by these higher prices, since they spend a larger share of their incomes on energy-related products and services than more affluent households do. They also are less able to afford investments that can reduce their energy consumption, such as buying a more efficient car or a new heating and cooling system. If nothing is done to protect people of limited means, many more of them will slip into poverty, those who are poor will become poorer, and the trend toward widening income inequality will be aggravated.

\$750 to \$950 per year is our estimate (based on analysis by the Congressional Budget Office and data from the Consumer Expenditure Survey) of how much, if left to fend for themselves, average families in the poorest 20 percent of the population would have to come up with to cover the increased costs that would arise from a 15 percent reduction in emissions.<sup>1</sup> This is a group whose average income is only modestly over \$13,000 a year.

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<sup>1</sup> The Congressional Budget Office has provided a figure of \$680 for the average increase in cost for the bottom 20 percent of *households* under a 15 percent reduction in emissions. Using CBO's own household-size-adjustment methodology, we have estimated the impact on the poorest 20 percent of *people*. (The bottom fifth of *households*

The \$750-\$950 estimate is the average impact on these households after taking into account the increases in Social Security and other cost-of-living adjustments that some of these households would receive as a result of the higher energy costs. Moreover, the 15 percent reduction in emissions is a 15 percent reduction from the levels to which emissions *otherwise would climb*, as estimated by CBO. (This is the standard that CBO has used in its analyses of various near-term impacts of climate-change policies.) This is modest by the standards of current legislative proposals. For example, the Lieberman-Warner cap-and-trade proposal (S. 2191) sets a more stringent target for emissions in 2020 — a reduction of *19 percent* below *actual 2005 levels*. Moreover, the required emissions reductions would become steadily larger in subsequent years, which means the added costs that low-income households would bear would eventually rise well above the \$750-\$950 level.

## **2. \$50 billion to \$300 billion per year: resources potentially generated by climate-change policies to help low-income consumers and to address other climate-change-related needs**

Fortunately, the same climate-change measures that would generate higher energy-related costs also could generate substantial resources to mitigate the effects of those costs. CBO estimates that various recent proposals to limit greenhouse-gas emissions by establishing a cap-and-trade system would create a valuable resource — emission permits — that would be worth \$50 billion to \$300 billion per year by 2020, depending on the specifics of the proposal. This is the amount of revenue that the government could expect to raise if it auctioned off all of the permits.

## **3. Approximately 14 percent: the share of the auction proceeds needed to fully offset the increased energy-related costs faced by low-income consumers**

The amount of revenue that the government could raise by auctioning off all permits in a cap-and-trade system far exceeds what would be needed to protect low-income consumers from higher energy-related prices arising from climate-change legislation. We estimate that a program designed according to the principles laid out later in this testimony to fully offset the impact on the poorest 20 percent of Americans and also provide some relief to many hard-pressed working families in the next 20 percent of the income distribution could be funded with approximately 14 percent of the resources that would be generated by auctioning off all allowances.

The specific dollar amounts in our first two sets of numbers — \$750 to \$950 per year of added costs for low-income consumers from a 15 percent reduction in projected emissions and \$50 to \$300 billion per year of potential revenue — are tied to specific emissions-reduction targets. The 14 percent figure, in contrast, is not tied to those targets. When the emissions target is looser and the amount of emissions reduction required is smaller, as it would be in the early years of most cap-and-trade proposals, the dollar amount of revenue that could be raised would be lower — but so would be the increase in energy prices and the added costs that households would face. As the cap tightened and larger emissions reductions were called for, the added costs to households would increase, but so would the revenue that the cap-and-trade system could generate to offset those added costs. As a result, no matter what the point in time or the tightness of the cap, the amount needed to protect low-income consumers would always be about 14 percent of the revenue that could be generated. Congress would not need to guess at the right amount to provide to shield low-

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disproportionately consists of one- and two-person households, and as a result, includes significantly less than one-fifth of the *people* in the United States.) For a fuller explanation of this adjustment, see <http://www.cbpp.org/10-25-07climate.pdf>, footnote 1.

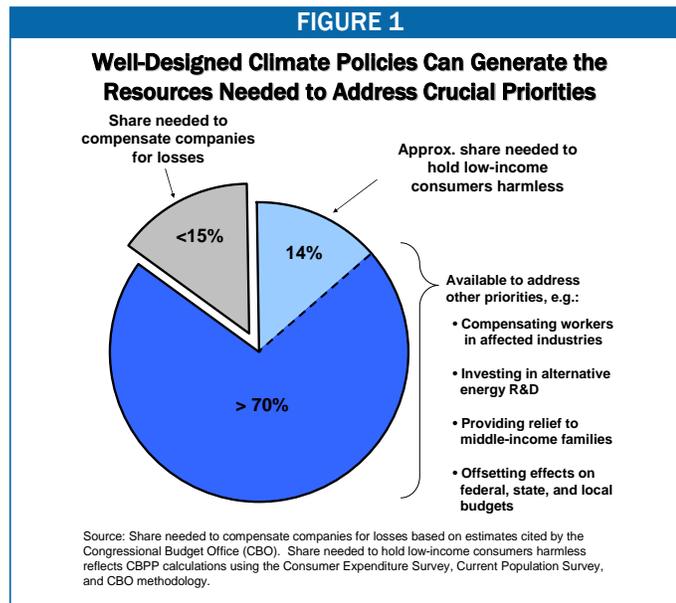
income consumers; an amount equal to about 14 percent of the allowance value in a cap-and-trade system would always be sufficient to protect these consumers from the price impacts they would face.

If Congress wanted to assist middle-income consumers as well, that, too, could be accomplished, as long as a sufficient share of the allowance value from a cap-and-trade regime were used for that purpose. For example, with approximately half of the allowance value, Congress could fully compensate the bottom 60 percent of American households and provide significant compensation to the next 20 percent as well, leaving out only the most affluent 20 percent of households, the group that has the most disposable income, consumes the most energy, and is the most able to make adjustments to its own consumption patterns to reduce its carbon footprint. A later section of this testimony discusses how a proposal to offset the added costs that low-income households would bear could be modified to include consumers further up the income scale as well.

**4. Less than 15 percent: the share of potential budget resources needed to compensate energy companies and other emitters for financial losses due to climate-change policies**

Although the resources that can be generated by sound climate-change policies are substantial, so are the budget claims that will arise from those policies. Besides the need to protect vulnerable populations, those claims include: basic research into alternative energy sources; assistance for workers and communities that depend on the coal industry and other industries that would be most affected by the shift to a less carbon-intensive economy; and various other needs. Higher energy prices also would drive up the cost to federal, state, and local governments of providing many important services and benefits. Unless those costs were offset, either government services would have to be reduced, taxes would have to be raised, or the federal deficit would increase.

In a cap-and-trade system, making sure that there are adequate resources to address these matters requires that most of the emission allowances be auctioned off, not given away for free to energy companies and other emitters due to misconceptions about the financial losses they would incur. One misconception is that those losses would be very large. CBO's review of the evidence concludes, however, that less than 15 percent of the total value of the allowances would be sufficient to offset the net financial losses of companies affected by policies to restrict emissions. More than



that would simply create what CBO calls “windfall profits” for companies receiving the free allowances.

A related misconception about cap-and-trade may also contribute to the belief that large numbers of emission allowances should be given away to energy companies and other industrial emitters. This is the mistaken belief that energy prices will not rise (or not rise as much) if the allowances are given away. That belief is *not* correct; it flies in the face of the basic law of supply and demand. A cap on emissions will limit the supply of energy produced from fossil fuels. When supply is restricted, prices rise — just as when there is a banana shortage, the price of bananas goes up. Regardless of whether the government gives away or sells the allowances, energy companies will be able to sell their products at the higher price.

If companies receive allowances for free, they will still be able to charge the higher price — i.e., they will be able to charge what the market will bear — and thus will reap what CBO has termed “windfall profits.” For these reasons, Harvard economist Greg Mankiw, who served as Chairman of President George W. Bush’s Council of Economic Advisers, has characterized a cap-and-trade mechanism under which the allowances are given away as a form of “corporate welfare.”<sup>2</sup> (As an analogy, if a distributor has purchased large quantities of a product at one price but some external event then causes the supply of future quantities of that product to fall — and the market price of the product to rise correspondingly — the distributor will not keep his prices low just because he purchased the products before their price climbed. He will charge what the market will bear. In the same way, energy companies will charge what the market will bear whether they obtain emissions allowances for free or purchase them through an auction.)

### **Avoiding Regressive Outcomes While Meeting Other Climate-Related Priorities**

The policies needed to reduce greenhouse-gas emissions would, by themselves, result in regressive changes in energy prices. As noted, however, they also can generate substantial revenue, and the revenue from auctioning off emission allowances under a cap-and-trade system could yield more than would be needed to offset the losses likely to be experienced by low- and moderate-income families and by workers in the industries hit hardest by the adjustment to a less carbon-intensive economy. The revenue could be sufficient both to address these issues *and* to meet various other legitimate purposes arising from the legislation (see Figure 1).

In contrast, giving away a substantial fraction of emission allowances to existing energy producers would do almost nothing to compensate low- and moderate-income families for their losses. A very large percentage of the benefits of such a giveaway would go to shareholders of the energy companies, most of whom have high incomes. Little revenue would be available to mitigate the effects on those least well-off.

Addressing regressivity and adjustment costs would not be the only claims on the resources that a cap-and-trade system could generate. Governments at all levels would pay more for the energy and energy-related products that they consume directly. For example, the Defense Department is the single largest consumer of energy in the United States and would incur higher costs. The higher

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<sup>2</sup> Greg Mankiw, “Greg Mankiw’s Blog: Random Observations for Students of Economics,” August 2, 2007.

energy costs also could trigger increases in automatic cost-of-living adjustments in Social Security and other benefit programs and some modest reductions in tax revenues. At state and local levels, governments could face higher costs for heating schools, public hospitals, and the like.

These issues can be addressed and any increases in deficits and debt avoided by using a share of the allowances to offset such tax and expenditure effects.<sup>3</sup> It should be noted that action to address climate change should have positive effects on the budget over the longer run, by reducing government expenditures for such things as natural disasters, crop failures, and disease epidemics that are likely to occur sooner or later in the absence of effective climate-change policies.

### **Evaluating claims for energy industry subsidies and tax incentives**

I would also like to sound a note of warning here. In conjunction with cap-and-trade legislation, this Committee is likely to be beset with claims for additional tax subsidies to encourage a wide variety of activities related to new energy technologies, efficiency measures, and the like in the name of addressing climate change. In some cases — for example, the need to expand certain types of basic alternative energy research — increased federal investment can be a valuable complement to the market incentives that a cap-and-trade system would provide. But in other cases, federal tax incentives or other subsidies will not be warranted. Tax subsidies will be wasteful to the extent that they subsidize activity that would take place anyway, even without the subsidies, or activity that is not well focused on reducing greenhouse-gas emissions.

This is an important issue. The nation already has an extensive set of energy subsidies and tax incentives, and proposals for more incentives and subsidies are likely to proliferate as climate-change legislation moves forward. But some meritorious energy-related activities for which government tax subsidies are warranted *today*, because the private market does not currently provide enough of an incentive for such activities, will *no longer* require such tax incentives under a cap-and-trade system because the increased costs of fossil-fuel energy will make the market incentives much more powerful. To avoid wasteful spending, the Committee should consider undertaking a comprehensive review of existing energy tax-incentives and subsidies to determine which ones would no longer be necessary or appropriate under a cap-and-trade regime with strong market-price signals. Eliminating current incentives that would be wasteful or redundant could free up resources to fund a substantial fraction of worthwhile new investment and conservation incentives to complement the cap-and-trade program's price signals.<sup>4</sup>

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<sup>3</sup> The Congressional Budget Office does not explicitly enumerate these tax and spending effects in its budget estimates for climate change legislation, but the conventional “income and payroll tax offset” that CBO applies to determine the net revenue change from auctioning emission allowances does, in effect, account for these effects on the federal budget (although not for their effects on state and local budgets). Roughly speaking, for a cap and trade system with auctions to be deficit neutral, only three-quarters of the proceeds from auctioning allowances can be spent. The rest needs to be set aside to account for the losses of income and payroll tax revenue that take place under the conventional assumption used in CBO and Joint Tax Committee cost estimates, which is that overall national income does not change. See for example, the two April 10, 2008 CBO cost estimates of S. 2191, one of which is for the bill as ordered reported by committee and the other of which is for an amended version of the bill that sets aside sufficient auction proceeds to make the legislation deficit neutral.

<sup>4</sup> For an excellent discussion of this issue, see Jason Furman, Jason E. Bordoff, Manasi Deshpande, and Pascal J. Noel, “An Economic Strategy to Address Climate Change and Promote Energy Security”, The Brookings Institution, October 2007, Part 2, pp. 20-27.

If lawmakers capture the necessary revenue (by auctioning most of the permits) and make wise choices among competing claims in designing climate-change policies, they can achieve the economic and environmental benefits from reducing greenhouse-gas emissions while having the resources to address the impact of higher prices on low- and moderate-income consumers and to support other legitimate new claims on the available resources. (It might even be possible to achieve some modest deficit reduction, which would be valuable at a time when the pressures on the federal budget will be increasing.)

If, however, lawmakers give away too many emissions rights to existing emitters, as some bills currently pending in Congress would do, or use substantial amounts of the proceeds for energy tax incentives that lack strong merit under a cap-and-trade system, they likely will fail to secure sufficient resources to meet the needs of Americans of limited means and to adequately address other high priority needs related to climate change. Such a course could result in significant increases in poverty and hardship and in a further widening of the gap between rich and poor.

### **Designing Climate-Change Legislation That Shields Low-Income Households from Increased Poverty and Hardship**

Ensuring that sufficient resources are available to shield low-income households from increased poverty and hardship is crucial in the design of climate-change policies. But it is only the first step needed to avoid increases in poverty. It also is essential to use the resources made available for this purpose in a way that is *effective* in reaching low-income households, *efficient* (with low administrative costs), and *consistent with energy conservation goals*. At this early stage of the debate, no climate-change legislation introduced on Capitol Hill meets this goal, although there is a growing interest among a number of lawmakers in finding effective ways to protect low-income people from increased costs.

To shield vulnerable households from higher energy costs in a manner that is both effective and efficient, we recommend that policymakers follow five basic principles.

1. ***Protect the most vulnerable households.*** Climate-change legislation should not make poor families poorer or push more people into poverty. To avoid that outcome, “climate rebates” should be designed to fully offset higher energy-related costs for low-income families. A good place to start is by fully protecting households in the bottom fifth of the income spectrum — a group whose average household income is only a little more than \$13,000.<sup>5</sup> Families at somewhat higher income levels that struggle to make ends meet also will need some help in coping with the higher bills they will face.
2. ***Use mechanisms that reach all or nearly all low-income households.*** Members of some low-income households work for low wages and could receive a climate rebate through the tax code, such as through an increase in the Earned Income Tax Credit. But others are elderly, unemployed (especially during recessions), or have serious disabilities and are not in the tax system — and experience at state and federal levels shows that attempts to

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<sup>5</sup> Since \$13,300 is the *average* income of households in this income group, some of these households have incomes lower than that, while others have incomes that are somewhat higher. Among families of three, those in the poorest 20 percent of the population are those that have incomes below about \$27,000.

use the tax system to deliver relief to such households have been unsuccessful.<sup>6</sup> Yet climate rebates need to reach these poor households as well.

Fortunately, policymakers can tap existing mechanisms to reach the large number of low-income households that are not reached through a tax-rebate mechanism because their incomes are so low that they do not file a tax return. For example, “climate rebates” could be provided through the electronic benefit transfer (EBT) systems that state human service agencies use to provide various types of assistance to many poor people. (This is discussed further below.) Policymakers could fill any remaining gaps, and provide weatherization assistance, through some increases in the Low Income Home Energy Assistance Program.

3. **Minimize red tape.** Funds set aside for low-income consumers should go to intended beneficiaries, not to administrative costs or profits. Accordingly, policymakers should provide assistance as much as possible through existing, proven delivery mechanisms rather than new public or private bureaucracies.
4. **Do not focus solely on utility bills.** For households in the bottom fifth of the population, higher home energy prices will account for *less than half* of the hit on their budgets from a cap-and-trade system. Furthermore, about 20 percent of the households in the bottom fifth have their utility costs reflected in their rent, so they pay for utilities indirectly, through the rents their landlords charge. Policymakers should structure climate rebates so they can help such low-income families with the rent increases they will face as a result of climate policies, as well as with the higher prices low-income households will incur for gasoline and other products and services that are sensitive to energy costs.

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<sup>6</sup> Over the years, a number of states have established refundable tax credits that are available to all low-income households, including those that have no or little earnings and do not file state income tax returns. These state tax credits are most commonly designed to provide relief from state sales taxes or property taxes. In most such states for which data are available, a large portion of the low-income households that are not required to file state income tax returns fail to file for these tax credits and thus do not receive them.

States have found it difficult to get the word out to the diverse array of low-income people who are not otherwise connected to the income tax system. In addition, many people apparently are reluctant to have anything to do with state or federal revenue agencies and do not file income tax returns if they are not required to do so.

Another example of this phenomenon occurred last year at the federal level, when all households with telephones qualified for a small refund for certain federal telephone excise taxes paid for the past three years, as a result of a court decision. To obtain these rebates as flat dollar amounts of up to \$60, households not filing a federal tax return needed merely to file a short, simple form with the IRS. Treasury data show the *fewer than 6 percent* of the eligible low-income households who do not ordinarily file an income tax return (but whom the IRS expected to file for this rebate) actually did so. (For further discussion of these issues, see Robert Greenstein, Sharon Parrott, and Arloc Sherman, “Designing Climate-Change Legislation that Shields Low-Income Households From Increased Poverty and Hardship,” Center on Budget and Policy Priorities, revised March 21, 2008.)

Many of these state tax credits and the federal telephone tax rebate are smaller than a federal climate-change tax credit would be, and a larger tax credit would be expected to induce greater participation. Even so, a significant percentage of low-income households would likely be missed. Indeed, there are early indications that this phenomenon also is occurring this year with regard to the delivery of economic-stimulus rebates to low-income elderly households and others who are not required to file federal income tax returns. Of the 14 million tax filing units that the IRS has identified as potentially eligible for stimulus payments because they consist of people who receive Social Security or veterans payments but who do not ordinarily file tax returns, only 1.75 million had filed as of March 29.

5. **Adjust for family size.** Larger households should receive more help than smaller households because they have higher expenses. Families with several children will generally consume more energy, and consequently face larger burdens from increased energy costs, than individuals living alone. Many other forms of assistance vary by household size; this one should as well.

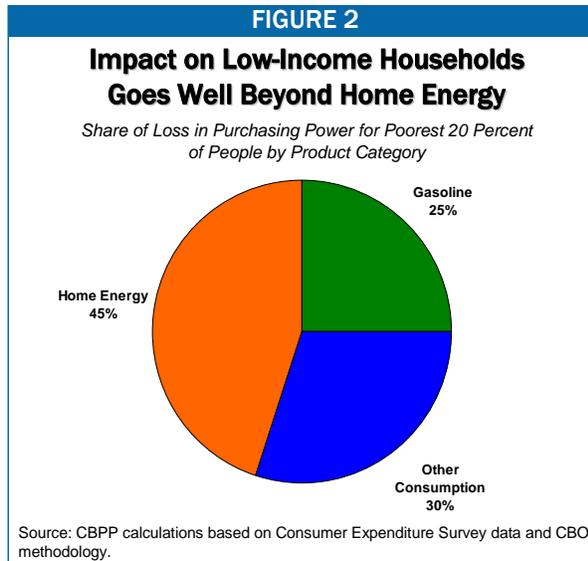
### A “Climate Rebate” That Meets These Principles

A combination of an increase in the Earned Income Tax Credit and a rebate delivered through state electronic benefit transfer systems would reach the vast majority of low-income households, and would do so without creating the need for a new bureaucracy or large administrative costs.

The **Earned Income Tax Credit** is a powerful tool for reaching millions of low-income working families; this committee (and Congress and the relevant administrations) relied on EITC expansions in both 1990 and 1993 to offset the impacts on low-income working families of the increases enacted in those years in gasoline and (in 1990) other regressive excise taxes. Under cap-and-trade legislation, the EITC’s parameters could be designed to adjust automatically over time to reflect the increasing consumer costs that result from the steady tightening of the emissions caps. (This could be done through a formula that ties the adjustments in the annual EITC parameters to government calculations of the loss in consumer purchasing power resulting from the emissions caps.)

If such EITC increases were all that was done, however, the result would still be a substantial increase in poverty and hardship. About half of those in the bottom fifth of the population do not qualify for the EITC in any given year, in most cases because they are elderly, have a serious disability, were unemployed in the prior year due to a weak labor market, or are raising young children and are temporarily out of the labor force. The group left out includes some of the poorest children in the country. A tax-based strategy such as the EITC consequently needs to be coupled with a form of assistance that is available to other low-income households.

The best such mechanism is the **Electronic Benefit Transfer** system that all state human service agencies use to provide food stamp assistance — and in most states, other benefits (such as child care or TANF assistance) as well — to a broad array of very low income households. A climate rebate administered through existing state EBT systems would be much less expensive to set up and administer than virtually any alternative, because states already have the EBT system in place. States could fairly easily issue a monthly rebate to the millions of low-income households that are already enrolled in either the Food Stamp Program or in the low-income subsidy for the Medicare prescription drug benefit (which reaches a large share of the low-income elderly and disabled



population). Poor households that do not receive either of those benefits but that meet the eligibility criteria for food stamps (income below 130 percent of the poverty line and limited assets) and wished to receive the climate-change rebate could apply for the rebate through their state human services agency.

The rebate delivered through the state EBT systems could be designed to mesh with the EITC so that for working-poor households, the amount provided through the EBT mechanism would phase down as income increased and the amount provided through the EITC phased up.<sup>7</sup>

These two delivery mechanisms — an EBT climate-change rebate and an expanded EITC — could be supplemented with a smaller but still significant increase in the Low-Income Home Energy Assistance Program (LIHEAP) to help low-income households that faced particular hardship because of extremely high energy costs even after the EBT rebate or EITC boost was provided, and to provide weatherization assistance and assistance with home energy efficiency to low-income households. LIHEAP also would be a backstop that could provide another way to help reach low-income elderly people not picked up through the other mechanisms, since it disproportionately serves the elderly.

By building off existing, effective programs, this approach would succeed in reaching most low-income households. About *three-fourths* of all households in the bottom fifth of the income spectrum would be reached with little additional paperwork because they already participate in the Food Stamp program, the EITC, or the low-income subsidy under the Medicare prescription drug benefit. (An estimated 28 million low- and moderate-income households would receive assistance automatically because they already have an EBT account through the Food Stamp Program or receive the EITC. Another 7 million households receive the Medicare low-income subsidy and do *not* receive food stamps; they could be enrolled in the rebate program either automatically or with little additional paperwork.)

We estimate that 14 percent of the value of emissions allowances in a cap-and-trade system would fund this proposal.

### **Providing Relief to Middle-Income Consumers**

Efficient climate change policies also will reduce purchasing power for middle-income consumers. While middle-income households will face smaller purchasing power losses (measured as a share of income) than low-income households and should be better positioned to deal with them, they will still incur meaningful costs.

Policymakers may conclude that a portion of the value of the emissions allowances should be used to provide relief for middle-income consumers. As just noted, a policy that fully offset the purchasing power losses of low-income households would require about 14 percent of the value of the allowances if it were efficiently designed. Providing full relief to households in the bottom 60

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<sup>7</sup> Very low income households would receive their climate rebate through the EBT mechanism. Low-income working families with incomes in the EITC phase-in range would receive part of their rebate through the EBT mechanism and part through the EITC. Most low-income working families would receive their rebate entirely through the EITC.

percent of the income scale and partial relief to the next 20 percent of households would require about *half* of the value of the emissions allowances.

### **Designing Relief for Middle-Income Consumers**

The tax system is a good mechanism for delivering help to middle-income households, as well as to low- and moderate-income working families. These households already file income tax returns, and benefits provided through the tax system will reach them. In addition, a “climate change tax credit” could be designed so it adds little complexity to the filing process either for filers or for the IRS.

There are two important points to keep in mind in designing tax relief for middle-income consumers.

**First, tax benefits intended to reach middle-income households should be provided in the form of tax credits, not tax deductions.** The value of a deduction depends on the taxpayer’s marginal tax bracket. A \$1,000 deduction is worth \$350 to a household in the 35 percent tax bracket ( $\$1,000 \times 35\%$ ), but only \$150 to a household in the 15 percent bracket, and \$100 to a household in the 10 percent bracket.

In contrast, credits are worth the same amount to all taxpayers. This makes them a much more appropriate mechanism for providing energy-cost relief to middle-income families, the large majority of whom are in the 15 percent tax bracket.

**Second, middle-income relief could easily be integrated with the low-income relief proposal described above.** I described above a proposal to deliver relief to low-income households primarily through two mechanisms: the EITC and state EBT systems. If the goal were to provide relief to middle-income households as well, a refundable “climate change tax credit” that is available to both low- and middle-income households (and phases out above specified income levels) could be substituted for the EITC component of that proposal.

Like the EITC and EBT proposals described above, a climate change tax credit should include adjustment for family size. Since the effects of climate change legislation on households’ purchasing power will vary by household size, it would make sense for tax benefits intended to relieve purchasing power losses to vary by family size as well. Also like the EITC proposal, the size of the tax credit would be based on government estimates of the loss in purchasing power caused by the limitation on carbon emissions.

### **Reductions in Income Tax Rates Would Not Target Relief Effectively to Middle-Income Families**

Some have proposed using revenue raised by auctioning emissions allowances to reduce personal income tax rates. Such a proposal would not target relief to middle-income households effectively and would do next to nothing for households with incomes just a little too high to qualify for assistance provided through an EITC expansion. Instead, reductions in personal income tax rates would provide the largest tax benefits to upper-income households, the group least in need of assistance.

The reason, of course, is that the benefits of any marginal rate cut rise with income. For example, if all marginal income tax rates were cut by 1 percentage point, the climate relief for a married couple with two children and income of \$45,000 would be \$201. For a similar family with income of \$200,000, the rate cut would provide a benefit of \$1,751. And for a family with income of \$1 million or more, the rate cut would be worth \$9,757.

Table 1 shows the effects of a 1 percentage-point reduction in all income tax rates. Those who least need help in coping with higher energy costs would receive the biggest tax benefits.<sup>8</sup>

Even an approach that reduced only the bottom two tax rates would be problematic. This is because the benefits of any reduction in personal income tax rates phases in slowly with income. Among families of four, only those with incomes of *more than \$90,000* — that is, only those who are at or above the top of the 15 percent income tax bracket — would benefit in full from a reduction in the bottom two tax rates.

**Table 1: Value of a 1 Percentage Point Cut in All Individual Income Tax Rates to a Married Couple With Two Children at Various Income Levels (2008)**

<u>Income</u>	<u>Tax Cut</u>
\$45,000	\$201
\$60,000	\$351
\$75,000	\$501
\$100,000	\$751
\$200,000	\$1,751
\$500,000	\$4,751
\$1,000,000	\$9,751

Source: CBPP calculations. Assumes households do not itemize deductions and do not owe the Alternative Minimum Tax.

### Deficit Reduction Would Likely Be Better for the Economy Than Rate Cuts

Part of the motivation behind proposals to use revenues from climate-change legislation to reduce individual income tax rates is the hope that this approach would benefit the economy and perhaps mitigate any economic costs that climate-change policies might have.

Given current budget conditions, however, the most effective means of promoting long-term economic growth is probably deficit reduction. The large, sustained budget deficits and high levels of federal debt projected under current policies are a significant threat to the economy over the long term. As Federal Reserve Chair Ben Bernanke has noted, persistent budget shortfalls like those projected for future decades “reduce national saving and therefore imperil, to some extent, the future prosperity of our country.”<sup>9</sup> Some experts also have warned that there is some risk that the large, sustained deficits projected under current policies could lead to a more sudden financial crisis.<sup>10</sup>

<sup>8</sup> The disparate nature of the tax benefits that would be provided would be even greater under a flat percentage across-the-board reduction in income tax rates. For example, if all rates were reduced by 5 percent (so that the 10 percent rate was lowered to 9.5 percent, the 15 percent rate was lowered to 14.25 percent, and so on), a married family with two children and income of \$45,000 would receive a \$111 tax benefit, while a family making \$200,000 would receive a \$1,889 benefit and a family making \$1 million would receive a \$15,643 benefit.

<sup>9</sup> Hearing before the House Financial Services Committee, February 15, 2006.

<sup>10</sup> Robert E. Rubin, Peter R. Orszag, and Allen Sinai, “Sustained Budget Deficits: Longer-Run U.S. Economic Performance and the Risk of Financial and Fiscal Disarray,” January 4, 2004.

Under these circumstances, the economic benefits of measures that reduce deficits and move the nation toward a more sustainable fiscal path are large. Comparing these gains with the economic gains from maintaining lower marginal income tax rates, the Congressional Budget Office observed that the economic benefits associated with lower marginal rates “are small compared with the economic benefits of moving the budget onto a sustainable track.”<sup>11</sup>

While any deficit reduction included in climate-change legislation would not be large enough by itself to move the nation onto a sustainable fiscal course, studies by the Joint Committee on Taxation and by economists at the Brookings Institution and the University of California at Berkeley all have found that — dollar for dollar — the economic effects of deficits are larger than the economic effects of changes in personal income tax rates.<sup>12</sup> These studies find that the economy would be better off in the long run with current marginal rates and lower deficits than with reduced marginal rates and higher deficits. (This is CBO’s conclusion as well.) This implies that the economic benefits of deficit-reduction measures should exceed the economic benefits of reductions in marginal income tax rates.

In short, if the purpose of a proposed reduction in personal income tax rates is to provide some relief to middle-income consumers who will face higher energy costs, then a climate tax credit would be far superior. If the purpose of a proposed rate cut is to boost economic growth, then devoting the funds to deficit reduction instead would yield stronger results.

## **Conclusion**

Well-designed climate-change policy that auctions most or all of the permits can generate resources that can be used to avoid regressive outcomes and address other legitimate budgetary claims arising from the new policy. Policymakers should recognize the importance both of generating adequate revenue and of addressing concerns regarding equity and fiscal responsibility so that they do not up with a policy that increases poverty and further widens gaps between rich and poor, increases deficits and debt, or both.

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<sup>11</sup> Congressional Budget Office, “The Long-Term Budget Outlook,” December 2005.

<sup>12</sup> Joint Committee on Taxation, “Macroeconomic Analysis of Various Proposals to Provide \$500 Billion in Tax Relief,” JCX-4-05, March 1, 2005; William G. Gale and Peter R. Orszag, “Bush Administration Tax Policy: Effects on Long-Term Growth,” *Tax Notes*, October 18, 2004; Alan J. Auerbach, “The Bush Tax Cut and National Saving,” *National Tax Journal*, September 2002.