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DESIGNING CLIMATE-CHANGE LEGISLATION THAT SHIELDS LOW-INCOME HOUSEHOLDS FROM INCREASED POVERTY AND HARDSHIP

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Efficient, effective policies to reduce greenhouse-gas emissions work in part by raising the prices of fossil-fuel energy products to encourage energy efficiency and the substitution of clean energy sources for fossil fuel. This is essential to prevent extensive environmental and economic damage from climate change. However, it 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.

The cost increases will pose special challenges for low- and moderate-income households because, as Congressional Budget Office studies have shown, they spend a larger share of their budgets on energy than better-off households do. Using methodology developed by CBO and data from the Bureau of Labor Statistics' Consumer Expenditure Survey, we estimate that households in the poorest fifth of the population would, on average, face an estimated \$750¹ a year in added costs (in today's dollars) if emissions were reduced 15 percent below projected levels, which is a modest emissions-control target. These households have average income only

KEY FINDINGS

- To offset the higher energy and other prices low-income families and individuals will face because of climate-change legislation, policymakers need to deliver assistance in ways that are effective, efficient, and consistent with energy conservation goals.
- Assistance for low-income consumers should meet certain basic standards. It should: (1) fully offset the impact of higher costs on the bottom fifth of the population, (2) reach as many in this vulnerable group as possible, (3) cover increases in households' various energy-related expenses, not just their utility bills, (4) reflect family size, (5) operate through proven delivery mechanisms, and (6) phase up as emission controls phase in. Existing proposals do not meet these standards.
- Most low-income households could be reached through an approach that relies on a combination of the electronic benefit transfer systems states use to deliver some low-income assistance, which could be used to deliver a monthly "climate-change rebate," and the Earned Income Tax Credit, which could be expanded to help defray increased energy-related costs. Supplemental help could be given through the Low-Income Home Energy Assistance Program and the Weatherization Assistance Program.
- Funding equal to about 14 percent of the value of the emissions allowances under a "cap-and-trade" system would be enough to hold the poorest fifth of households harmless and partially offset the costs for those with modestly higher incomes.

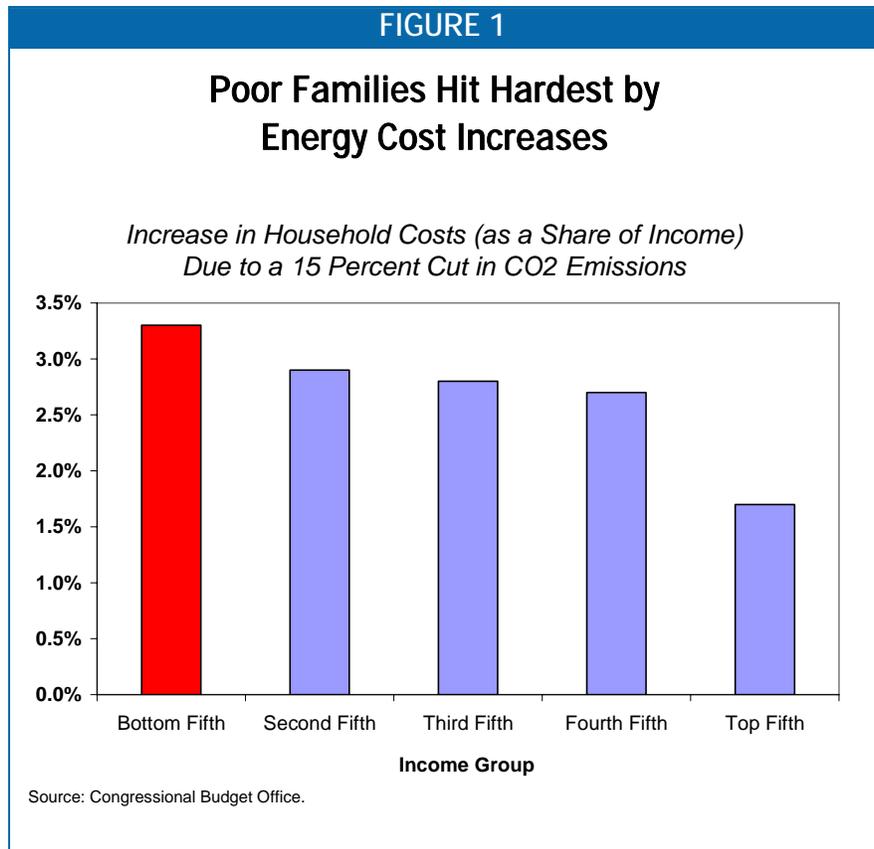
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modestly over \$13,000. Moreover, those added costs would grow over time as the emissions-control targets become stricter. Most climate-change bills before Congress would phase in increasingly aggressive targets over a number of years, a step that most environmental policy experts believe is necessary.

If left to fend for themselves, these households will experience significant hardship trying to pay the higher bills. Many will slip into, or be driven deeper into, poverty. Fortunately, as a separate Center analysis² (and CBO analyses) indicate, well-designed climate-change policies can provide sufficient revenue to cushion the impact on vulnerable households so that increases in poverty do not occur, as well as to address other public needs related to climate change. (See the box on page 3.)

Making sure that sufficient resources are available to shield low-income households from increased

poverty and hardship is critical in the design of climate-change policies. It is, however, only the first step. It also is vital to use the resources made available for this purpose in a way that is *effective* in



¹ For a description of the CBO methodology that the Center used to estimate the impacts of climate-change policies on consumers' budgets, see Terry Dinan and Diane Lim Rogers, "Distributional Effects of Carbon Allowance Trading: How Government Decisions Determine Winners and Losers," *National Tax Journal*, June 2002.

The Center's methodology differs from CBO's in an important respect. CBO examines quintiles (fifths) of households, not of the U.S. population. There is an important difference. If one simply ranks households by income, regardless of household size, then the bottom fifth of households disproportionately consists of one- and two-person households, and as a result, includes significantly less than one fifth of the U.S. population. Moreover, the bottom fifth of households, if measured in this manner, includes many small households that are not poor (i.e., that are above the poverty line), while missing many larger households that are poor. (The poverty line is adjusted by household size.)

CBO has developed a standard methodology for how to address this problem when ranking households by quintile, so that one can examine the poorest fifth of the population, rather than the bottom fifth of households irrespective of household size. CBO uses that methodology in other work it conducts on income distribution issues, and we have used that methodology here.

² Chad Stone and Matt Fiedler, "The Effects of Climate-Change Policies on the Federal Budget and the Budgets of Low-Income Households: An Economic Analysis," Center on Budget and Policy Priorities, October 24, 2007, <http://www.cbpp.org/10-24-07climate.htm>.

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.

This paper examines how to design effective mechanisms to meet this goal. It proposes a set of standards that any mechanisms should meet and explains why various proposals suggested to date do not meet these standards.

The paper also outlines a two-pronged approach to protecting low-income consumers that entails providing a “climate-change rebate” to low-income households through established electronic benefit transfer (EBT) systems (a debit card system states use to deliver certain low-income benefits), in combination with targeted tax relief through the Earned Income Tax Credit. This would protect millions of low-income Americans from higher energy costs, avoid missing significant segments of the low-income population, and entail very low administrative costs. To fill any remaining gaps and promote weatherization of poor households’ homes, this approach should be supplemented by increases in the Low-Income Home Energy Assistance Program (LIHEAP) and the Weatherization Assistance Program (WAP).

Finally, the paper shows how this approach could be modified to reach much of the middle class as well, if resources allow.

Basic Standards That Any Proposal to Protect Low-Income Consumers Should Meet

To ensure that higher energy-related prices do not drive more Americans into poverty, push those who are already poor deeper into poverty, or impose hardship on struggling families with modest

Auction Off, Don’t Give Away, Most of the Emissions Permits Under a Cap-and-Trade System

A “cap-and-trade” system, the emissions-control approach that currently seems to have the most support in Congress, can provide ample resources to shield vulnerable Americans from the effects of higher energy prices, but only if a significant share of the emissions allowances are auctioned off to energy companies rather than given away. If the allowances are largely provided to energy companies free of charge, cap-and-trade legislation will effectively impose heavy burdens on low-income households (while conferring windfall gains on companies and their shareholders).

As the Congressional Budget Office has explained, auctioning a significant share of the emissions permits will have no effect on energy prices, which will increase — and by essentially the same amount — *regardless* of how many of the permits are auctioned rather than given away. This is because the emissions cap will limit the supply of energy produced from fossil fuels, and market forces will drive up the price for that energy to the point where the demand falls to equal the supply.

Moreover, the larger the share of the permits that is auctioned, the larger the amount of revenue that will be available to shield low- and moderate-income households and to meet other important needs related to climate change, such as investing in alternative energy research and compensating workers in affected industries.

The other market-based emissions-control approach, a carbon tax, would automatically produce resources that could be used to shield low- and moderate-income households and meet other needs associated with climate-change policies.

incomes, climate-change legislation should include low-income assistance mechanisms that meet the following standards:

1. Higher energy costs should be fully offset for people in the bottom fifth of the income scale. Without adequate assistance, the poorest fifth of households will see significant losses in disposable income as a result of efforts to reduce greenhouse-gas emissions. However, a cap-and-trade system that auctions most of the emissions permits would generate sufficient revenue to shield low-income households from higher energy-related costs. (A carbon tax can as well.)

In 2005, a family of three was in the bottom quintile (i.e., the bottom income “fifth”) if it had annual income below \$27,000 (in 2007 dollars); an individual was in the bottom quintile if he or she had income below \$16,000.³ The average income of a household in the bottom quintile was modestly over \$13,000.⁴

Well-designed policies to cushion households in the bottom quintile also will need to provide some assistance to some households in the second quintile, for two reasons. First, many households in the second quintile are hard-pressed working families or near-poor elderly individuals who will need some help. For example, a married couple with two children earning \$38,000 is in the second quintile; significant increases in energy costs will impose burdens on these families.

Second, failure to help these families would create serious work disincentives. If assistance abruptly ended once a household’s income climbed one dollar above the threshold that divides the first and second quintiles, workers could be forced to turn down extra hours or a slightly higher-paying job if it meant forgoing all climate-related assistance and thereby ending up worse off financially. Phasing out the assistance gradually in the second quintile solves this problem.

To fully offset the increased costs borne by the bottom quintile and to partially offset the increased costs of those with modestly higher incomes would require approximately 14 percent of the value of all emissions permits under a cap-and-trade system (or 14 percent of the revenues generated by a carbon tax). Such an amount is readily affordable if most of the permits are auctioned off rather than given away free to energy companies.⁵

2. Policymakers should come as close as possible to reaching all low-income consumers. Assistance provided solely through the federal income tax system, for example, would not reach all low-income households. Many of them have little or no earnings (such as people who are elderly,

³These figures are based on the March 2005 Current Population Survey. The figures are for the poorest fifth of households using the size-adjustment methodology employed by CBO in its historical tables on the distribution of income and tax burdens. Under this approach, where a household ranks on the income scale depends on both the dollar amount of its income and the number of people in the household, reflecting the fact that larger households have greater needs.

⁴The figures in this paragraph are based on the Census Bureau’s standard definition of “money income” (i.e., cash income before taxes). If income is defined, as is done in certain CBO analyses, to include not only cash income but also various types of non-cash income such as nutrition assistance, housing subsidies, and the value of employer- and government-provided health benefits, the average after-tax income of households in the bottom fifth is about \$16,000 in today’s dollars.

⁵ Stone and Fiedler, op. cit.

have a disability, or are unemployed, particularly during a recession) and do not have to file income tax returns.

It would be a mistake to adopt an approach that misses a significant fraction of low-income households. This is true even if the mechanism fully offsets the loss among low-income households *as a group*. If large numbers of individual low-income households receive no assistance, significant hardship will still result.

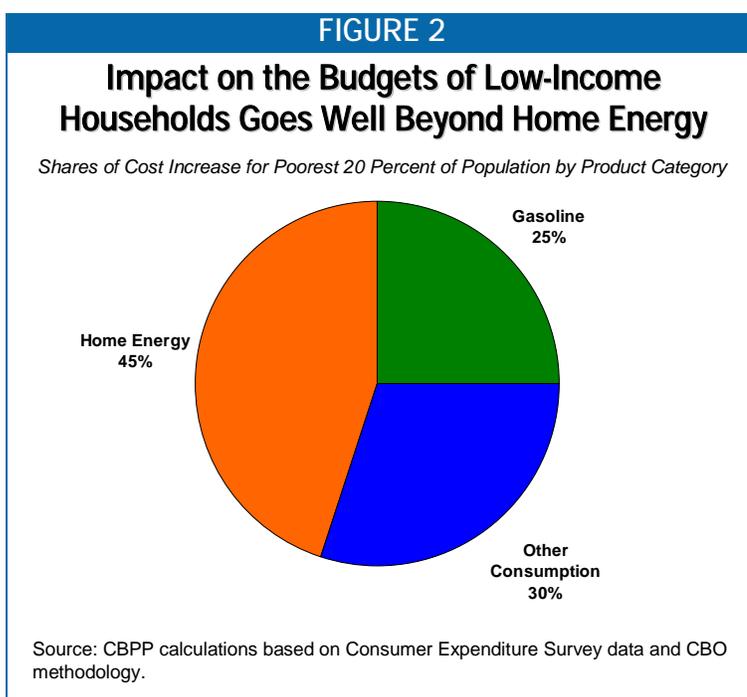
To be sure, no mechanism or set of initiatives will be perfect — some households will get missed. But the goal should be to come as close as possible to reaching all low-income households.

3. 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.

4. Low-income households will need help with a wide range of energy-related expenses, not just utility bills. The impact of climate-change legislation on low-income households will go well beyond their utility bills, which do not capture higher costs for gasoline or a wide range of products whose prices will rise to reflect the higher cost of manufacturing or transporting them.

On average, higher gasoline costs will constitute 25 percent of the impact of increased energy costs on households in the bottom fifth of the income scale, according to an analysis of Consumer Expenditure Survey data that takes into account the ways that energy is used in the production of consumer goods. (This percentage will generally be even higher in rural areas, where people drive greater distances.) Increased costs for non-energy products, such as food or clothing, will constitute another 30 percent of the impact. Less than half (45 percent) of the impact will stem from higher home energy costs.

Another reason why low-income assistance should not focus solely on households' utility bills is that many low-income households are renters and pay for utilities only indirectly, through the rents their landlords charge. About 20 percent of the households in the bottom fifth of the population have at least one utility bill reflected in their rent, according to data from the Residential Energy Consumption Survey.



In addition, since the best way to encourage conservation is for households at all income levels to see the impact of higher energy costs, a low-income assistance mechanism should not mask those higher costs by removing much or all of them from households' utility bills.

5. Delivery mechanisms should be highly efficient. Assistance should go to the intended beneficiaries, not be consumed by administrative costs, bureaucracy, and paperwork. To accomplish this, assistance should operate as much as possible through existing, proven delivery mechanisms rather than new programs and bureaucracies.

6. The amount of assistance should phase up as emission controls phase in. Most proposals to reduce emissions phase in over time. In the early years, the emissions reduction — and consequently the impact on consumers — would be small. When the emissions-control provisions were fully in effect, the reduction in emissions would be larger, as would be the increase in energy prices.

The amount of help that households receive should similarly phase up over time. This can be done through assistance mechanisms that are designed to phase up as the overall value of the emissions permits (or the revenue from a carbon tax) rises.⁶

Existing Proposals to Protect Low-Income Consumers Have Serious Shortcomings

This section examines five ideas that have been discussed for helping low-income consumers cope with higher costs resulting from climate-change legislation. While some may be appropriate as elements of a larger package, all have serious shortcomings as the *primary* way to provide assistance.

1. Rely primarily on the Low-Income Home Energy Assistance Program. Some people assume the logical way to offset low-income households' higher energy costs would be to increase LIHEAP funding. Some increase in LIHEAP funding should be included in any assistance package, as explained below. But because of limitations in the program, LIHEAP should not be the principal mechanism to help low-income households.

Of greatest concern, LIHEAP does not reach the vast bulk of low-income households. *Only one of every seven low-income households that meet the LIHEAP eligibility requirements actually receives LIHEAP assistance*, according to data from the Energy Department's Residential Energy Consumption Survey.⁷ (To be eligible for LIHEAP, households generally must have income below 150 percent of the poverty line or 60 percent of state median income.)

In addition, LIHEAP is operated by state governments in some places and local community action agencies or other entities in others. As a result, eligibility criteria and benefit levels vary from state to state, as do the basic mechanisms for operating the program.

⁶ Under a cap-and-trade system, the amount by which energy costs increase will be directly related to the value of the permits that are made available.

⁷ These data, the latest available from the Energy Department, are for 2001. Data from the National Energy Assistance Director Association suggest that LIHEAP participation has risen somewhat since 2001 due to increases in funding. Based on those data, however, LIHEAP still reaches only about one in six eligible low-income households.

Moreover, as noted above, higher home energy costs will constitute less than half of the impact of climate-change legislation on low-income households.

In short, LIHEAP — a \$2 billion program that reaches only about 6 million low-income households and is narrowly tied to utility bills — is not equipped to serve as the main mechanism to offset the estimated \$20 billion in increased annual costs (in today's dollars) that the 24 million households in the bottom fifth of the income scale would face from climate-change legislation that reduces emissions by 15 percent below projected levels. For LIHEAP to try to serve this function, its basic structure would have to be transformed, and a dramatically larger bureaucracy would have to be created, at considerable administrative cost.

2. Provide assistance through utility companies. Another approach that has been suggested is to give utility companies a large volume of additional emissions allowances free of charge, which they would sell and then use the proceeds to reduce the impacts of higher energy costs on low- and middle-income consumers and promote energy efficiency.

Legislation recently introduced by Senators Joseph Lieberman and John Warner features this approach, providing allowances worth many billions of dollars to electric utilities for this purpose. Under the Lieberman-Warner bill, this would absorb the lion's share of the money intended for low- and middle-income consumers. (See the box on page 9.)

Unfortunately, this approach would be neither especially effective nor very efficient.

- As noted above, a mechanism that works through utility companies will not help households facing higher gasoline prices, higher rents (when utilities are built into the rent), or increased costs for a range of other consumer products.
- To target assistance on low-income households, utility companies would have to develop a mechanism to gather reliable information on their customers' incomes. Yet public agencies like the IRS cannot provide sensitive income information to private companies, as doing so would violate privacy laws and likely weaken compliance with the tax laws. Utility companies could try to set up their own systems for gathering and verifying information on customers' incomes, but many customers will resist sharing such information with a private company and could lose out on climate-change assistance as a result.

Moreover, utility companies almost certainly would insist on substantial government subsidies to cover the large costs of building an infrastructure to gather and verify income information for millions of customers. Such subsidies would pay for an infrastructure that essentially duplicates what public agencies already do.

It may make sense to provide modest amounts to utility companies to help identify particular low-income households with inefficient appliances and help them convert to more energy-efficient appliances. But to provide huge sums to utility companies as the main mechanism for offsetting the increased costs for tens of millions of low- and moderate-income Americans would be ill advised.

The experience of the sulfur dioxide cap-and-trade program established in the 1990s to address acid rain raises further doubts about the efficacy of relying heavily on utility companies to provide assistance to low-income and other customers — or, for that matter, to encourage energy efficiency

on a large scale. Under that program, 300,000 allowances were made available at no cost to utility companies that could show they had reduced emissions by giving customers incentives to conserve energy or by generating more electricity from renewable resources. Analysts at Resources for the Future have found that companies applied for only about *16 percent* of the 300,000 allowances and that in many of these cases, the companies were seeking compensation for activities that would have occurred anyway.⁸ This suggests that while such efforts may be successful on a modest scale, they are unlikely to work well on a large scale.

3. Provide grants to states or a new private or quasi-governmental entity, which would allocate the funds among low-income households. While states will need to be involved in administering any program that provides assistance to low-income households, simply shipping the money to the states would be a mistake. Federal climate-change legislation will affect low-income people in every state; if states are left to design their own programs, similarly affected households will receive widely varying levels of assistance depending on where they live, and some states could decide to leave out entire groups of low-income households.

In addition, some states might choose to develop wholly new programs to deliver the climate-change assistance. Not only would this likely entail high administrative costs, but participation rates would likely be lower under new state programs than existing ones. One reason is the difficulty of informing low-income households about a new program and how to apply for it. Another reason is that with 50 different relief mechanisms in the 50 states, a national outreach effort would be nearly impossible. As noted below, states that have tried in recent decades to institute new low-income tax rebates for regressive state sales or property taxes have generally failed to achieve a high level of participation: these rebates tend to reach fewer than half of the low-income households that otherwise do not file tax returns.

At the same time, Congress should avoid creating a new *federal* bureaucracy to administer the assistance. A new federal bureaucracy would entail unnecessary administrative costs by duplicating existing efforts such as for checking pay stubs. It also could suffer from a low “take-up” rate, at least for a number of years.

Establishing a new private entity to reach the broad low-income population would be still more problematic. With no infrastructure or delivery mechanism to accomplish this task, and no ready way of determining which households are low income, such an entity would inevitably incur high administrative costs and would likely fail to reach many of its intended targets.

4. Provide a payroll tax rebate. Another proposal is to provide assistance to consumers through a payroll tax rebate. The most prominent proposal in this arena is by Tufts University economist Gilbert Metcalf.⁹ A bill introduced by Rep. John Larson, H.R. 3416, includes a similar approach.

⁸ Kenneth Gillingham, Richard G. Newell, and Karen Palmer, “Retrospective Examination of Demand-Side Energy Efficiency Policies,” Resources for the Future Discussion Paper RFF DP 04-19 REV, June 2004; revised September 2004.

⁹ Gilbert E. Metcalf, “A Green Employment Tax Swap: Using a Carbon Tax to Finance Payroll Tax Relief,” The Brookings Institution and the World Resources Institute, June 2007.

Lieberman-Warner Bill Falls Well Short on Low-Income Assistance

On December 5, 2007, the Senate Environment and Public Works Committee passed S. 2191, America's Climate Security Act. The legislation, sponsored by Senators Lieberman and Warner, marks a significant step forward in climate-change policy. Its low-income relief provisions, however, suffer from two serious flaws. First, the amount made available to protect low-income consumers is inadequate. Less than 5 percent of the value of the emissions allowances is specifically set aside in the early years to assist low-income households. This is only about one-third of the amount (14 percent) we estimate is needed. Second, the mechanisms for delivering assistance are not likely to be very effective in reaching low income households. The bill contains the following three mechanisms:

- *LIHEAP and Weatherization.* Less than a quarter of the emissions allowances would initially be auctioned for public purposes. Eighteen percent of the auction revenues would be deposited in an Energy Assistance Fund,¹ and three quarters of the amount deposited in that fund — less than 3 percent of the total value of all allowances in the first year and less than 5 percent even in 2020— would be targeted for LIHEAP and weatherization assistance for low-income households.¹ As explained in this paper, LIHEAP is not well suited to deliver the bulk of the low-income assistance.
- *Allowances for States.* States would be given 10.5 percent of the emissions allowances and required to use at least 90 percent of the resulting proceeds for one or more of 13 broad purposes. These include public transportation, energy technology, aid to displaced workers, aid to energy-intensive industries, and a range of urban, rural, and agricultural water projects, as well as low-income assistance. It is unlikely that more than a small amount of these resources would be devoted to low-income consumers.
- *Allowances for retail distributors of electricity and natural gas.* Finally, 9 percent of the emissions allowances would be allocated to load-serving entities serving retail electricity consumers, and 2 percent would be allocated to local distribution companies serving retail natural gas consumers for two purposes: (1) “to mitigate economic impacts on low- and middle-income energy consumers;” and (2) “to promote efficiency on the part of energy consumers.” Since middle-income consumers substantially outnumber low-income consumers (and since utility companies cannot readily identify which customers have low incomes), the bulk of these proceeds likely would be used for modest cost reductions that are spread thinly across customers at all income levels, as well as to some energy efficiency investments. The amount of low-income assistance likely would be quite modest.

In sum, the overall amount of assistance to low-income households would probably fall far short of the need, especially in the early years of the program. Most low-income households would likely be missed entirely or helped with only a modest share of their increased energy costs. Increases in poverty and hardship would likely ensue.

¹ The percentage of allowances set aside for auctions is scheduled to use from 21.5 percent in 2012 to 69.5 percent in 2031 as the percentage allocated free to companies is scaled back. If this schedule is adhered to, the 18 percent of auctioned allowances allocated to the Energy Assistance Fund would grow to equal 12.5 percent of all allowances in 2031, 9.4 percent of which would be targeted to LIHEAP and weatherization.

² The other one-quarter of the amount deposited in the Energy Assistance Fund would be earmarked for a new Rural Energy Assistance Program that apparently would not be targeted on low-income households, although such households would likely receive some assistance from it.

In a recent paper written for the Brookings Institution and the World Resources Institute, Metcalf proposes offsetting the increased consumer costs associated with a carbon tax set at \$15 per metric ton of carbon dioxide by providing a refundable income tax credit equal to 15.3 percent of the first \$3,660 of an individual's earnings. Metcalf's proposal is described as a payroll tax rebate because the credit would equal the combined employer and employee shares of payroll taxes on the first \$3,660 of earnings. The rebate would be available to all workers, not just those with low or moderate incomes.

One concern about this proposal is its cost. Under Metcalf's plan, the payroll tax rebate would consume all of the proceeds from a carbon tax, leaving nothing for related priorities such as basic research on alternative energy sources or assistance to coal miners.

The rebate could be made less costly if it were phased out for workers with higher incomes, but that would not address an even more serious problem: a payroll tax rebate would miss a large share of the nation's low-income households. Nearly half of households in the bottom fifth of the income scale would receive no relief from the rebate, even if all who were eligible applied for it, because only households with earnings would qualify.¹⁰ For this reason, a payroll tax rebate should not be the sole mechanism to provide low-income assistance, though it could be effective in conjunction with other mechanisms that reach low-income people who do not have earnings.

The households that would be left out by a payroll tax rebate are quite needy. Their average income is only \$9,400, and about 75 percent of them include an elderly individual or a person with a disability.

Many jobless households, including a significant number of very poor families with young children, would be left out as well. About one of every five families with children in the bottom fifth of the population would be missed, and the number of households left out would increase during recessions, when unemployment rises.

Moreover, many of the households that *would* be eligible for the rebate would likely not receive it. Households who have incomes too low for them to owe income tax and do not file an income tax return would miss out on the rebate.

For all of these reasons, only a minority of the households in the bottom fifth of the population would benefit from a payroll tax rebate. This gap could be narrowed if the rebate were available to anyone who pays payroll tax *or* receives Social Security. But more than one-sixth of households in the bottom fifth of the income scale receive neither earnings *nor* Social Security benefits, and participation by those with Social Security likely would be low because most low-income elderly individuals are not required to file an income tax form.

An additional problem with the payroll tax rebate is that its size varies with the number of workers in a household rather than the numbers of individuals in a household. Thus, a single-parent family with two children would receive the same rebate as a single worker living alone, even though it uses more energy. Similarly, a two-parent family with several children would receive the same relief as a married working couple with no children.

¹⁰ CBPP analysis of the 2006 March Current Population Survey.

5. Provide a flat amount for many (or all) Americans through a refundable “climate-change income tax credit.” Another idea that some have put forward is to make all households — or all households with income below a certain level — eligible for a new credit against their federal income taxes. This “climate-change tax credit” would be refundable for households that do not earn enough to owe income tax.

While this credit would not be limited to people with earnings, it would suffer from some of the same problems as the payroll tax rebate. A large share of low-income households would likely be left out because many low-income people — including many of the poorest families and most of the poor who are elderly or have a disability — do not file income tax returns.

To try to reach these people and encourage them to file, the federal government would need to undertake a large-scale outreach effort, which would likely have only limited success. The experience of states is instructive here. 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.) Yet in most states for which data are available, a large portion of low-income households that are not required to file state income tax returns fail to file for these tax credits.¹¹

Despite states’ good intentions, they have found it difficult to get the word out to such a broad and diverse array of low-income people who are not otherwise connected to the income tax system. In addition, many people are apparently 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 this 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 the result of a court decision. To obtain these rebates as flat dollar amounts of up to \$60,¹² households not filing a federal tax return needed merely to file a short, simple form with the IRS. Treasury data show, however, that *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.¹³

¹¹ Maine, for example, recently enacted major property tax rebates for low- and middle-income families that are worth up to \$2,000 and are administered outside the income tax. The participation rate was only 41 percent initially, officials estimate, and even after an extensive marketing campaign it has risen only to about 55 percent. The rate is undoubtedly lower for poor families, non-homeowners, and those who do not file tax returns. See “Mainers Forgoing New Tax Savings,” *Portland Press Herald*, September 7, 2006. (The 55 percent estimate was provided in October 2007 by Richard Woodbury, an economist and state representative who helped design the program and has written widely about it.) Participation rates appear to be even lower for state sales tax credits, which are typically smaller (often less than \$100). A Kansas sales tax credit in the late 1990s averaging \$47 per family had an estimated participation rate of only 33 percent.

¹² The standard telephone excise tax rebates varied with the number of exemptions that a tax filer claimed. The standard rebate amount ranged from \$30 for filers claiming one exemption to \$60 for those claiming four or more exemptions.

¹³ The IRS expected 22 million forms claiming the rebate. As of June 9, 2007, however, it had received only 1.2 million claims, either through the form or from people who filed a regular income tax return solely to claim the rebate. See “The 2007 Tax Filing Season Was Generally Successful, and Most Returns Were Timely and Accurately Processed,” Treasury Inspector General for Tax Administration, September 21, 2007, Reference Number 2007-40-187, pp. 6-7.

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.

What to Do? Designing an Efficient and Effective Mechanism to Help Low-Income Consumers Cope with Increased Energy-Related Costs

No single mechanism is likely to reach most of the low-income population. Fortunately, there are two existing delivery mechanisms that, between them, can largely accomplish this task: the Earned Income Tax Credit (EITC) and the electronic benefit transfer (EBT) system that states already use to provide various types of state and federal assistance to low-income families and individuals through a debit card. Modest increases in funding for LIHEAP and weatherization assistance could round out the package, providing help to low-income households facing especially high energy bills or in need of assistance to improve the energy efficiency of their homes.

The EITC — or a refundable payroll tax rebate, if more money is available and the goal is to provide assistance to the broad middle class as well — is a powerful tool for reaching millions of low-income working families. However, as discussed above, a tax-based mechanism will miss about half of the low-income population, including most poor people who are elderly or have a disability, the long-term unemployed (especially during economic downturns), and some very poor families with young children. Any tax-based strategy therefore needs to be coupled with a broad-based form of assistance available to other low-income households.

The best such mechanism is the EBT system that all state human services agencies use to provide food stamp assistance — and, in a number of states, other benefits as well — to a broad array of low-income households. A climate-change 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 for low-income households. States could fairly easily issue a rebate to the millions of low-income households already enrolled in either the Food Stamp Program or the low-income subsidy for the Medicare prescription drug benefit, which reaches a large share of the low-income elderly population. Only modest administrative costs would be incurred.¹⁴

Poor households that did not automatically receive these benefits but met the eligibility criteria for food stamps (total income below 130 percent of the poverty line and limited assets) and wished to receive the climate-change rebate could apply through their state human services agency. No new bureaucracy would have to be created to handle them.

As explained below, this rebate could be designed to mesh with the EITC (or payroll tax rebate) so that for working-poor households, the amount provided through the EBT mechanism would phase down as the amount provided through the EITC (or a payroll tax rebate) was phasing up.

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

¹⁴ Under such an approach, states should be provided funds to cover the start-up costs incurred in expanding their EBT systems to deliver the climate-change rebates and to help defray the modest ongoing administrative costs that would be involved.

Would COLAs Solve the Problem for the Elderly and People with Disabilities?

Would the annual cost-of-living adjustments in the Supplemental Security Income program (the federal cash assistance program for very poor people who are elderly or have disabilities) and Social Security insulate low-income people who are elderly or have disabilities from the effects of increased energy costs? The answer is: only in part.

If emissions were reduced 15 percent, elderly households and people with disabilities in the bottom fifth of the income scale would face increased costs averaging about \$980 per year in 2007 dollars.^a The SSI and Social Security COLAs (and to a much lesser degree, the annual “cost of food” adjustment in the Food Stamp Program) would reduce this loss by a total of about \$400, or about 40 percent; the COLAs would be larger than would otherwise be the case because the increases in energy prices caused by climate-change policies would be reflected in a higher Consumer Price Index. But even with the higher COLAs, there would still be a considerable hole in these households’ budgets.

The principal reason the COLAs would offset only a portion of the increased energy costs is that Social Security and SSI benefits cover only a fraction of these households’ consumption. The rest is financed by other income and savings.

(Note: the estimate in this paper that a 15 percent reduction in emissions would lead to an average increase of \$750 in costs for households in the bottom fifth of the income scale is a net figure, *after* the COLA increases are taken into account. The average increase in net costs would be somewhat lower on average among households with Social Security and SSI income and somewhat higher among other low-income households.)

^a CBPP calculation using Consumer Expenditure Survey data.

Assistance Program 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 and weatherization assistance 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 scale would be reached with little or no additional paperwork because they already participate in the Food Stamp Program (administered through the EBT system), the EITC, or the low-income subsidy under the Medicare prescription drug benefit. Overall, an estimated 29 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 6 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.¹⁵

¹⁵ These figures were calculated using the 2006 March Current Population Survey, the 2006 Health and Retirement Study, administrative data from the Food Stamp Program, and data from the Kaiser Family Foundation on the Medicare Part D Low-Income Subsidy.

Outreach efforts would still be needed, but with such a broad initial base of recipients, the job of reaching all or most low-income households — and many moderate-income households — would be far more achievable than under proposals to create new programs from scratch or to rely upon LIHEAP, which serves only one-seventh of eligible low-income households.

This proposal is described in more detail below.

Electronic Benefit Transfers

State human services agencies use EBT systems to deliver various public benefits. The systems provide households with an EBT account, which they access through a debit card; states generally contract with a private company (for example, Citibank or J.P. Morgan Chase) to create the EBT accounts and debit cards. This is a secure mechanism for providing assistance to the significant share of low-income households that are “unbanked.”

A monthly climate-change rebate could easily be transferred electronically to an EBT account. Account-holders would then use the rebate to make payments to utility companies, home appliance dealers, and others. (Households with bank accounts could opt to have their assistance direct-deposited into those accounts instead.)

A strong advantage of this approach is its efficiency in reaching the low-income population. As noted, it would immediately reach all households that receive food stamps. This is important, because the Food Stamp Program is the sole low-income program that serves nearly all categories of low-income households (instead of only reaching specific groups such as the elderly, people with disabilities, or families with children). Nearly 12 million households receive food stamps in an average month.

The Food Stamp Program does especially well in reaching low-income families with children — 84 percent of eligible families with children participate.¹⁶ It reaches a substantially smaller share of eligible elderly households, but that can be addressed to a significant degree by also providing the EBT rebate to seniors and people with disabilities who are enrolled in the low-income subsidy part of the Medicare prescription drug program. Sign-up for the low-income drug subsidy is not as high as had been envisioned but is nevertheless substantial, and the poorest elderly — those eligible for Medicaid — are enrolled automatically.¹⁷

This approach would make the EBT system a highly efficient means of reaching large numbers of poor households, without new bureaucracy or costly, duplicative application and verification procedures.

¹⁶ U.S. Department of Agriculture, Trends in Food Stamp Program Participation Rates: 1999 to 2005, June 2007.

¹⁷ “Dual eligibles” — low-income elderly and disabled people who are enrolled in both Medicare and Medicaid — are supposed to be enrolled in the subsidy automatically. However, some may not be receiving the subsidy because of continuing implementation problems. The design of the climate-change rebate outlined here assumes these problems will be fully resolved by the time the rebate would take effect. If they are not resolved, dual eligibles (other than those living in institutions) could be enrolled in the climate-change rebate automatically.

This approach also would provide strong safeguards against error. The Food Stamp Program does an excellent job of ensuring it enrolls only eligible households. In 2005, *National Journal* listed the program as one of the federal government's leading successes, citing its effectiveness in reaching low-income households and its low rates of error and fraud, which are far below those in the tax system. *National Journal* termed food stamps "a case study in effective government aid."

Low-income households that do not receive food stamps or the low-income drug subsidy could apply separately for the climate-change rebate; they would need to meet the financial eligibility and verification standards that households must satisfy to gain entry to the Food Stamp Program.

This proposal would make no changes to the prescription drug benefit or the Food Stamp Program. It would simply use systems in place under these programs to achieve a high degree of effectiveness in reaching low-income households and a high degree of efficiency in avoiding new bureaucracy and keeping administrative costs low.

The amount of the rebate could be designed to vary by family size, equaling the average increase in costs that a household of a given size would bear as a result of climate-change legislation. This amount could then be made available to households with incomes below 50 percent of the poverty line and phased out between 50 and 130 percent of the poverty line. This would mesh nicely with an EITC-based component of climate-change assistance, which would be phasing in as the EBT rebate was phasing out.

Qualifying low-income people who are elderly or have disabilities, however, should receive a full rebate irrespective of whether their incomes are below 50 percent of the poverty line. They generally will not qualify for the EITC, so the help they get will have to come entirely through the EBT rebate.¹⁸ Congress could vary the size of the rebate further to reflect other factors such as region of the country or vehicle ownership. For example, it could provide larger rebates to families living in very cold or very hot climates or in rural counties where people have to drive longer distances.

A climate-change rebate provided through EBT systems would still miss some low-income people — principally working families with incomes in the upper part of the food stamp income range, where food stamp participation is low, or above the food stamp eligibility limit. Those families would be assisted by an EITC increase.

¹⁸ Many low-income people who are elderly or have serious disabilities would receive a partial offset for increased energy costs through higher cost-of-living adjustments for Social Security and the Supplemental Security Income program that would follow a rise in energy prices. As explained in the box on page 13, the higher COLAs would offset about 40 percent of the average increase in costs that low-income elderly and disabled households would bear.

The proposal outlined here bases its rebate levels on the average increase in costs for low-income households as a whole, net of the assistance the higher COLAs would provide. An alternative (but more complex) approach would be to provide a somewhat lower rebate level to low-income elderly and disabled households and somewhat higher rebates to other low-income households, in order to reflect the effect of the COLAs. The approach outlined here would modestly overcompensate participating low-income elderly and disabled households on average and modestly undercompensate other participating low-income households. But it would be simpler to operate and explain.

The Earned Income Tax Credit

While most of the help provided through an EBT rebate would go to households in the bottom fifth of the income scale, the EITC serves a somewhat broader population. Just under half of its benefits go to working families in the bottom income fifth, with the rest going primarily to households in the second fifth.¹⁹ In 2007, the EITC will be completely phased out at about \$40,000 for a married couple with two children. (It will be completely phased out at less than \$15,000 for workers without children.)

An expansion of the EITC to help offset increased energy costs can readily be designed in a manner that would fit well with an EBT-based climate-change rebate. The EITC increase can be very small for very poor workers (since they would likely be receiving an EBT rebate) and phase up in the same income range in which an EBT relief could phase down.

The EITC has been used to provide similar relief in the past. Congress expanded the EITC in 1990 in part to offset the regressive effects of increases in alcohol, tobacco, and gasoline taxes, and in 1993 in part to offset the regressive effects of further increases in gasoline taxes.

An EITC expansion would be a highly efficient way to help offset higher energy costs. Because it would simply modify the existing EITC structure, there would be virtually no increase in administrative costs, paperwork, or bureaucracy.

Moreover, a very large share of families with children eligible for the EITC — roughly 80 to 85 percent²⁰ — file the appropriate tax form and receive the EITC. Some 17.4 million families with children received an EITC for tax year 2005. Participation in the EITC is lower among workers without children, in large part because the EITC for these workers is so much smaller, but 4.3 million childless adults and married couples nevertheless received the EITC for 2005.

A combination of an EBT-based climate-change rebate and an EITC expansion (coupled with some increase in LIHEAP and weatherization assistance funding, as discussed below) could offset the overall increase in costs that the bottom fifth of the population would bear and reach the vast majority of the households in that group. The EITC expansion also would provide significant help to many working families in the second fifth of the income scale and strengthen work incentives.

The Role of LIHEAP and Weatherization Assistance

To aid low-income people who face particularly high energy costs and may need additional help to avert hardship — including help in reducing their energy consumption — some increase in funding for LIHEAP and the Weatherization Assistance Program (WAP) is needed.

¹⁹ CBPP calculations using the 2006 March Current Population Survey.

²⁰ See John Karl Scholz, “The Earned Income Tax Credit: Participation, Compliance, and Anti-Poverty Effectiveness,” *National Tax Journal* 47: 63-87, 1994; and “Participation in the Earned Income Tax Credit Program for Tax Year 1996,” Fiscal Year 2001 Research Project #12.26 of the Internal Revenue Service, http://taxpolicycenter.org/TaxFacts/papers/irs_eitc.pdf

As explained above, LIHEAP cannot be the main mechanism for providing broad-based assistance to low-income consumers. It is a block grant that provides a limited pot of funds and serves only a small minority of low-income households. WAP faces similar problems of financing and scope. But these programs can serve the supplementary purposes envisioned here. Because LIHEAP and WAP are administered by state or local authorities and allow very significant flexibility in program design and implementation, they are better suited than other programs to deal with case-by-case problems for families or individuals who might otherwise fall through the cracks.

To ensure the continuity of these supplemental LIHEAP and WAP funds, they should be provided as a *mandatory* but capped funding stream, on top of the regular LIHEAP and WAP appropriations. Congress used this approach to deliver the LIHEAP increase included in the Deficit Reduction Act of 2005. This approach is necessary because if the LIHEAP and WAP boosts are merely provided through increases in the program authorizations, there will be no assurance that the actual appropriation of these funds will occur.

The Issue of Overlap

There will be some overlap among the groups of low-income households that receive assistance through the three mechanisms outlined here (an EBT rebate, the EITC, and LIHEAP and weatherization assistance). This approach is designed, however, to minimize overlap by operating through programs that target somewhat different populations. The climate-change rebate would be provided to low-income elderly and disabled households and households receiving food stamps, which generally are the lowest-income households. The EITC targets the bulk of its benefits to working families at somewhat higher income levels. Furthermore, the EBT benefit could phase down and the EITC benefit phase up in such a way that people who qualified for both would generally get only a partial benefit from each. LIHEAP and weatherization assistance would operate to fill any holes.

No system is perfect, and some low-income consumers would still miss out on this help despite being eligible. That number would be vastly smaller, however, than under any alternative mechanism that has been suggested.

Broader Options: Reaching the Middle Class

If policymakers wish to offset a portion of the increased energy costs faced by the middle class as well, this proposal could be modified in either of two ways.

- *Substitute a refundable payroll tax rebate for the EITC increase.* The EITC component could be replaced with a refundable tax credit that essentially operates as a payroll tax rebate for people with earnings and also is provided to people who have no earnings but receive Social Security. This would cover tens of millions of additional households. If this were done, some modification in the specific structure of an EBT rebate might be needed to ensure proper coordination between the two benefits.

One concern is that if a payroll tax rebate covered people all the way up the income scale, as under Gilbert Metcalf's proposal, its cost would be very high. That could leave few, if any,

resources for other important purposes related to climate-change policy. Or, it could lead to a significant scaling back of the level of payroll tax relief, in which case low-income working families would not receive adequate assistance.

At the same time, it should be noted that the EITC for workers without children is quite limited; only workers between the ages of 25 and 64 with incomes below about \$15,000 (a level that would rise somewhat if the EITC were enlarged to provide climate-change assistance) qualify. Many low-income workers who are not raising minor children would fare better under a payroll tax rebate than an EITC increase.

- *Retain the EITC increase and add an increase in the standard deduction used in the federal income tax.* About two-thirds of taxpayers do not itemize their deductions, and this group would benefit from an increase in the standard deduction. Such a change would be especially effective for tax filers with modest incomes: some 80 percent of filers with adjusted gross incomes below \$50,000 use the standard deduction, compared to just 10 percent of those with incomes above \$100,000.²¹ (Of course, if the standard deduction were increased, the proportion of filers using it would rise.)

As noted, the availability of resources to assist middle-income households will depend in large part on what share of the emissions permits are auctioned off rather than given away.

Conclusion

The United States can take the strong steps that are needed to address climate change while shielding low-income households from increased poverty and hardship. By ensuring that climate-change legislation generates the necessary resources (such as by auctioning most of the emissions permits under a cap-and-trade system), by taking into account the full range of increased energy-related costs facing low-income consumers, and by delivering assistance through existing mechanisms where possible, policymakers can protect low-income families and individuals both effectively and efficiently.

²¹ Internal Revenue Service, <http://www.irs.gov/pub/irs-soi/05in12ms.xls>.