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Note: This testimony and the testimony of Robert Greenstein were delivered on the same day and are similar in most respects.

CHAD STONE ON PROTECTING LOWER-INCOME FAMILIES IN CLIMATE CHANGE LEGISLATION
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Chairman McDermott, Ranking Member Linder, and other members of the Subcommittee. Thank you for the opportunity to testify on this important topic. The main message of my testimony is that it is indeed possible for climate change legislation to fight global warming effectively while also protecting consumers. Here is the argument in a nutshell:

Fighting global warming requires policies that significantly restrict greenhouse gas emissions. The most cost-effective ways to do that are to tax emissions directly or to put in place a "cap-and-trade" system. Either one will significantly raise the price of fossil-fuel energy products — from home energy and gasoline to food and other goods and services with significant energy inputs. Those higher prices create incentives for energy efficiency and the development and increased use of clean energy sources. But they will also put a squeeze on consumers' budgets, and low- and moderate-income consumers will feel the squeeze most acutely.

Fortunately, climate change policies can be designed in a way that preserves the incentives from higher prices to change the way we produce and consume energy while also offsetting the effect on consumer budgets of those higher prices. That is because well-designed climate policies will generate substantial revenue. That revenue will be sufficient to offset the impact of higher prices on the budgets of the most vulnerable households, to cushion the impact substantially for many other households, and to meet other legitimate public needs, such as expanded research on alternative energy sources.

To capture this revenue in a cap-and-trade system, it is important that most or all of the allowances or permits used to limit emissions be auctioned for public purposes rather than given away free to emitters. Giving away, or "grandfathering," allowances is sometimes portrayed as a way to keep down costs for consumers, but that argument does not stand up to scrutiny. Rather, if allowances are given away free to polluting firms, only the firms and their shareholders would benefit. These firms would, as CBO has explained, receive "windfall profits": they would be able to charge higher prices for their products, but they would not have to pay for their emissions allowances. Ordinary consumers would get no help in dealing with the strain that the higher prices put on their budgets. Greg Mankiw, former chair of the Council of Economic Advisers for President George W. Bush, has written in a similar vein that consumer prices will rise regardless of whether allowances are given free to emitters and that grandfathering the allowances would constitute "corporate welfare." There is little disagreement among economists about this effect.

Protecting *low- and moderate-income* consumers should be the top priority of the consumer relief provisions included in climate change legislation. Those people are the most vulnerable because they spend a larger share of their budgets on necessities like energy than do better-off consumers. They also are the people least able to afford purchases of new, more energy-efficient automobiles, heating systems, and appliances. But middle-income consumers, too, will feel the squeeze from higher energy-related prices, and policymakers likely will want to extend consumer relief to them as well.

Much of the Center on Budget and Policy Priorities' work on climate change policy has focused on developing concrete proposals to shield low- and moderate-income households from increased poverty and hardship in a way that is *effective* in reaching these households, *efficient* (with low administrative costs), and *consistent with energy conservation goals*. With these goals in mind, the Center has designed a "climate rebate" that would efficiently offset the average impact of higher energy-related prices on low- and moderate-income households. That rebate would be delivered each month to very low-income households through state Electronic Benefit Transfer (EBT) systems, which are essentially debit card systems that states already use to provide food stamps, TANF, and other forms of assistance to low-income families, the elderly, and others. A rebate also would be delivered to low- and moderate-income *working* families in the form of a higher Earned Income Tax Credit (EITC).

More recently, the Center has developed options for modifying this proposal to extend consumer relief farther up the income scale while still protecting those who are the most vulnerable. In these proposals, a new refundable tax credit would substitute for the EITC, while the EBT delivery mechanism would be preserved for very low-income households that do not file income taxes. The size of the climate rebate, and how far up the income scale it extends, can be made larger or smaller depending on the portion of the auction revenues that policymakers wish to devote to this purpose. All proposals we have developed, however, have a common principle and feature — they all fully offset the average "hit" on low-income households. Climate-change policies need not — and should not — push more Americans into poverty or make those who are already poor still poorer.

The approach that we have designed can be linked to the climate change measures outlined in the President's budget. The President proposes instituting a cap-and-trade system, auctioning all the allowances, and using the major share of the auction proceeds for consumer relief — including about $65 billion of relief that would be delivered every year through a permanent extension of the Making Work Pay tax credit. The President also proposes using $15 billion a year for clean technology investments to facilitate the transition away from fossil fuels.

Additional measures to protect consumers — particularly individuals with very low incomes, some seniors, and others who do not pay taxes — will be necessary. Over time, the relief that would be provided through the Making Work Pay tax credit also would need to be increased or supplemented to respond to the further increases in energy costs that would occur as the emissions cap tightened. We are currently developing proposals to incorporate the EBT component of our low-income proposal into an approach that makes these adjustments.

The Center on Budget and Policy Priorities strongly believes that a rebate approach to providing consumer relief in climate change legislation is far superior to the alternatives we have seen, both for

low-income consumers and for consumers farther up the income scale. Our specific concerns with approaches that rely on utility companies to provide consumer relief or on proposals that would cut tax *rates* (as opposed to providing a refundable tax credit) are outlined later in this testimony. The approach that is closest in spirit to our approach is the cap-and-dividend approach popularized by Peter Barnes, which would use all of the allowance value for per capita dividends. We believe, however, that careful attention would have to be devoted to the delivery mechanism in such an approach to make sure that the dividend would actually reach low-income households, and we think there are better uses for the allowance value that would be consumed by making payments to consumers with very high incomes under a cap-and-dividend system in which all the allowances were used for dividends.

The remainder of this testimony elaborates on these ideas. The next section discusses the economics of cap and trade in more detail. The section after that discusses our climate rebate proposal in more detail. And the last section discusses in more detail the reasons why we think our rebate approach is superior to other approaches we have seen.

The Economics of Cap and Trade: Fighting Global Warming Effectively While Also Protecting Consumers

Cap and Trade Is an Efficient and Effective Way to Reduce Emissions

Economists agree that the most efficient way to reduce carbon emissions is either to tax them directly or to put in place a "cap-and-trade system."[1] Several northeastern states have already implemented a cap-and-trade system on a regional basis as part of the Regional Greenhouse Gas Initiative. In addition, the 27 nations of the European Union have operated a cap-and-trade system since 2005.

A cap-and-trade system puts a limit (or "cap") on the overall amount of greenhouse gases — mainly carbon dioxide from the burning of fossil fuels — that businesses are allowed to emit each year. Electric power plants, oil refineries, and other firms responsible for emissions of carbon dioxide and other greenhouse gases are then required to purchase permits (called allowances) for each ton of greenhouse gas pollution they emit.

Over time, the number of emissions allowances would shrink in order to achieve the substantial emissions reductions that scientists say are necessary to curb global warming. This would force the economy to gradually adapt by reducing emissions through energy conservation, improved energy efficiency, and greater use of alternative clean energy technologies.

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[1] Like a cap-and-trade system, a carbon tax — a government-imposed charge on firms for every ton of greenhouse gas pollution they produce — uses market forces to achieve cost-effective emissions reductions. The two mechanisms operate in different ways, however. A cap-and-trade system specifies the amount by which emissions must be reduced and lets the market determine how high energy-related prices need to rise to achieve that reduction. A carbon tax does the reverse: it specifies the amount by which energy-related prices will rise, but it lets the market determine how much of an emissions reduction that price increase will cause.

Both mechanisms lead to pollution abatement and generate revenues that can be used to offset the effects of the energy cost increases that result.

Firms are free to buy and sell (i.e., to "trade") emission allowances. The price for carbon depends on the level at which the cap is set and the technology available to produce goods and services that use less carbon. Companies that are able to reduce their emissions easily can sell allowances to companies that have more trouble reducing their emissions.

Thus, cap and trade would give firms incentives to pursue cost-effective ways of cutting emissions. The less carbon a firm produces as part of its normal operations, the less money it must spend on purchasing allowances, or the more money it can make by selling its allowances to firms that are not able to reduce their pollution production as easily.

Cap and Trade Generates Revenues to Protect Consumers from Higher Energy Prices

A cap-and-trade system would raise the prices of goods and services whose production and use involve the emission of greenhouse gases. But it would also generate revenues to offset the effects of these cost increases.

Consumers would face higher prices both for home heating and cooling and for gasoline, food, and other items made with or transported by fossil fuels. These higher energy-related prices are necessary to encourage emissions reductions. But they do not have to reduce households' purchasing power. That depends on whether emissions allowances are given away free to polluters or auctioned and the proceeds then used to compensate consumers.

Auctioning the emission allowances rather than giving them to firms free of charge will generate substantial revenue that can be used for a variety of purposes, including offsetting the impact of higher energy-related prices on low- and middle-income consumers. The federal government would auction emissions allowances, and firms that emit carbon dioxide or other greenhouse gases would be required to purchase the permits. If instead, allowances were given away free to polluting firms, only the firms and their shareholders would benefit. These firms would, as CBO has explained, receive "windfall profits": they would be able to charge higher prices for their products, but they would not have to pay for their emissions allowances. Ordinary consumers would get no help in dealing with the strain that the higher prices put on their budgets.

There is a misconception that giving allowances away for free to emitters would be a way to lower the costs to consumers. That is incorrect and flies in the face of the basic laws of supply and demand. A cap on emissions will limit the amount of energy produced from fossil fuels. Stated another way, it will lower the supply of energy that is produced from fossil fuels. Regardless of whether the government gives away or sells the allowances, market forces — i.e., the laws of supply and demand — will raise the price of fossil-fuel energy to the point where the amount *demanded* will fall to equal the amount *supplied*. Whether energy companies have to pay for allowances or receive them for free, they will be able to sell their products at the higher market price that results from the reduction in the available supply of fossil-fuel energy. This increase in prices is the source of the windfall profits that would go to companies that received allowances for free but were able to charge the higher price that the market would bear.

The United States will incur some economic costs to change the way we produce and consume energy in order to reduce greenhouse gas emissions. But a broad consensus exists among scientists that reducing carbon emissions is essential to protecting the planet — and our long-term prosperity. In other words, failure to act is the more costly policy economically.

Higher energy prices under a cap-and-trade system will give all consumers the incentive to conserve energy and invest in energy efficiency, while rebates make sure the typical consumer has the necessary resources to respond appropriately to those higher prices without taking a substantial hit to his or her budget.

How a Climate Rebate Would Work

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 $15,000. Families at somewhat higher income levels that struggle to make ends meet also will need 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 use the tax system to deliver relief to such households have generally been unsuccessful.[2] 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

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[2] 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.

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. 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.

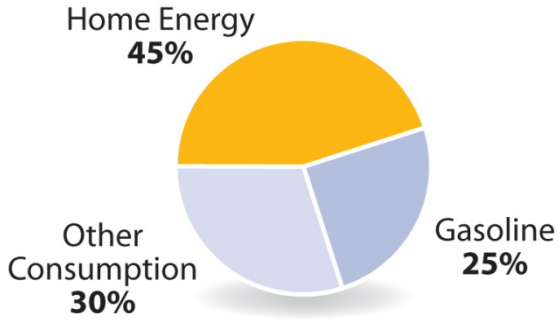
incomes are so low that they do not file a tax return. For example, "climate rebates" could be provided through the electronic benefit transfer (EBT) systems that state human service agencies use to provide various types of assistance to many poor people. (This is discussed further below.) Policymakers 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. ***Preserve Economic Incentives to Reduce Energy Use Efficiently***. Policies that suppress price increases in an important sector such as electricity blunt incentives to reduce fossil fuel use in that sector. That keeps electricity demand somewhat elevated and puts a greater burden on other sectors to provide the emissions reductions required under the cap. The result is that emissions reductions are more costly to achieve and allowance prices are higher. Consumers may pay less for electricity but they will pay more for other things.

5. ***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. (See Figure 1.) 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.

FIGURE 1:
Shares of Cost Increase for Poorest 20 Percent of Population by Product Category



Source: CBPP calculations based on Consumer Expenditure Survey data and CBO methodology

6. ***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 cap. (This could be done through a formula that ties the adjustments in the annual EITC parameters to annual data from the Energy Information Agency indicating the impact of the emissions cap on consumer purchasing power.)

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.

Some families that receive a rebate through the state human service agency also will have earnings over the course of the year and qualify for the EITC or climate-related tax credit. To ensure that families do not receive an excessive climate rebate, benefits received through the state human service mechanism would offset any climate-related tax credit for which the family otherwise would qualify. States would provide year-end information to families and the IRS on families' rebate receipt through the EBT system, and this information would be used to adjust the climate tax rebate a family would receive.

These two delivery mechanisms — an EBT climate-change rebate and an expanded EITC — could be supplemented with a smaller 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 or no 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 approximately 14 or 15 percent of the value of emissions allowances in a cap-and-trade system would fund this proposal.

Extending the Rebate to Middle-Income Consumers

This low-income rebate program could easily be modified so it also provides relief to consumers with somewhat higher incomes, an approach that we believe represents sound policy — and that also should enhance prospects for the legislation's passage. Here is how climate rebates for low- and middle-income households would work.

Retain the EBT rebate for very low-income households. Very-low-income households that do not file tax returns would receive their climate rebate in the same manner as they would under the Center's original low-income proposal: as a monthly benefit delivered through state EBT systems. Climate rebates could be provided directly to seniors, veterans, and people with disabilities – individuals who may not otherwise need to file an income tax return – by the Social Security Administration, the Veterans Administration, and the administrator of the Railroad Retirement program. Just as was done in the American Recovery and Reinvestment Act, these entities can effectively and efficiently deliver climate rebates to Social Security, SSI, VA, and Railroad Retirement beneficiaries. For those who do file an income tax return, these benefits would offset any climate related tax rebate for which they would otherwise qualify.

Create a new "climate tax credit" for other households. For all but very-low-income households and people on Social Security, SSI, VA, and Railroad Retirement, a refundable income tax credit (i.e., one that provides a refund check to families whose tax credit amount exceeds their income tax liability) is the most efficient way to deliver a climate rebate. Our original low-income proposal used the Earned Income Tax Credit for this purpose. Doing so would provide for effective targeting; the EITC phases out at moderate income levels. To reach middle-income as well as low-income households, however, would require a different vehicle: a new, refundable "climate tax credit," rather than an expansion of the EITC. The tax credit would go to anyone who files a federal tax return and whose income is below the eligibility limit set for the rebate; families would simply look up the size of their credit in a table similar to the one used now for the EITC.

President Obama has proposed using the Making Work Pay tax credit for this purpose. As proposed by the administration, that credit would be a fixed dollar amount. It would need to be modified, or a supplemental credit would have to be added, to take into account the increased impact on consumers' budgets that would need to be offset as the emissions cap tightened over time.

How big a rebate? As noted, under our original *low-income* proposal, the rebate would equal the lost purchasing power for the average household in the bottom quintile. The rebates would be scaled by family size; larger families would receive more sizeable rebates. The dollar amount of the rebate would go up over time as the emissions cap tightened and energy prices rose. Annual data from the Energy Information Administration on the impact of the emissions cap on consumers' purchasing power would be used to set the size of the rebate each year.

For a rebate also aimed at middle-income households, it would be more appropriate to tie the rebate's size to the average loss in purchasing power that households farther up the income scale would face. While low-income households feel the squeeze of higher energy prices more — they live on limited budgets, spend a larger share of their budgets on energy, and are less able to afford investments that can reduce their energy demand — the *absolute dollar size* of the purchasing power loss is somewhat larger at higher levels of income. Hence, a rebate set to offset the losses of middle-income families would need to be larger than a rebate targeted solely on low-income families. The rebate could, for example, be set equal to the average impact of the emissions cap on the budgets of households in the middle of the income scale.

How much would it cost? Because a rebate program aimed at middle-income as well as low-income households would go to more people and provide somewhat larger rebates, it would require more funding. The Center's low-income rebate program can be funded with about 14 or 15 percent of the total market value of the emissions allowances under a cap-and-trade program (or 14 or 15 percent of the revenues from a carbon tax). A rebate that would offset the average purchasing power loss of consumers in the next higher quintile would require about 35 percent of the total value of the allowances, and one that offset the average loss of the middle 20 percent of the population would require about 55 percent of the total allowance value.[3]

With 55 percent of the total allowance value generated by a cap-and-trade system used to fund rebates, 45 percent would remain available to meet other important needs. These include basic research and development on alternative energy, conservation efforts and energy efficiency investments, transition assistance for workers and communities harmed by the shift to a less carbon-intensive economy, adaptation to the impacts of climate change here and abroad, green job training, and offsetting impacts on federal, state, and local budgets. (Note: the Congressional Budget Office has indicated that the Treasury will need to retain approximately 25 percent of the auction proceeds to ensure that a cap-and-trade bill does not increase the federal deficit. This "25-percent offset" arises because CBO essentially assumes that the additional revenue collected from imposing a charge on emissions will result in a reduction of certain other federal revenues.[4])

Why Rebates Are Superior to Other Forms of Consumer Relief

[3] The total cost of rebates *as a percentage* of the emissions value is largely independent of how tight the cap is and what an emissions allowance costs. As the emissions cap under a cap-and-trade system tightens over time, this will increase the total value of the emissions allowances by raising the price of those allowances. It also will increase consumers' purchasing power losses by raising the price of energy. Since both of these increases will occur at approximately the same rate, the cost of climate rebates will stay approximately the same as a percentage of the total allowance value.

[4] Chad Stone, Jim Horney, and Robert Greenstein, "How CBO Estimates the Cost of Climate Change Legislation: Explaining the 25% Offset Rule," Center on Budget and Policy Priorities, May 13, 2008, http://www.cbpp.org/5-13-08climate.pdf.

Rebates are an effective way to deliver consumer relief. They can be provided easily through the federal tax system and state EBT systems, with no need for new agencies or bureaucracy at the state or federal level. Also, rebates protect households against the loss of purchasing power from higher energy-related prices *without* blunting consumers' incentives to respond to those higher prices by conserving energy and investing in energy efficiency improvements. Because energy-related products will cost more, households with the flexibility to conserve energy or invest more in energy efficiency will get more value for their budget dollar by taking these steps than by using their rebate to maintain their old ways of consumption. At the same time, rebates help households that cannot easily reduce their energy consumption to avoid a reduction in their standard of living.

Other proposals for consumer relief generally lack one or more of these advantages, pose other serious problems, or lack crucial details needed to know how they would work in practice.

Universal "Cap and Dividend"

The proposal closest in spirit to rebates is the universal "cap-and-dividend" proposal advocated by Peter Barnes, an energy entrepreneur who has studied this issue for a number of years.[5] Under this proposal, all emissions allowances in a cap-and-trade system would be auctioned and the proceeds divided evenly among all Americans on a per capita basis, mirroring the concept that all Americans have an equal stake in the planet's future.

The dividend would equal the average per capita loss of purchasing power that results from climate-change legislation. Therefore, the dividend would be smaller than the actual losses that high-income individuals would experience due to higher energy-related costs, because they have above-average per capita energy expenditures. It would be somewhat larger than the actual losses of low-income individuals.

There are a number of similarities between cap and dividend and the Center's rebate proposal. Both focus on consumer relief. The cap-and-dividend approach has the advantage of simplicity: everyone would secure a share of the revenues while still facing an incentive to reduce their carbon emissions. Nevertheless, cap and dividend raises several concerns.

- The primary issue is that distributing all revenues from the auction of emissions allowances as dividends would leave no money for other climate-related priorities, which would have to be funded from other sources. (Barnes treats the dividend as taxable income which means that the CBO "25-percent offset" discussed earlier in this paper would not be needed to keep the budget deficit from widening.)

- On a more technical front, cap and dividend would require an implementation mechanism. Barnes has suggested that households would receive monthly payments, preferably into their bank accounts (as is done with Social Security).[6] This would entail a significant expansion of the Social Security infrastructure or the creation of a similar administrative system. It would

[5] See Testimony of Peter Barnes, before the Committee on Ways and Means, U.S. House of Representatives, September 18, 2008, http://waysandmeans.house.gov/media/pdf/110/barnes.pdf.

[6] *ibid*.

also require ensuring that all Americans are signed up with appropriate banking services or that a more universal system of debit cards than currently exists is created. While these are not necessarily insurmountable barriers, developing such a system would be a considerable undertaking.

- Finally, under a per capita dividend, the size of a family's dividend would be tied strictly to the number of people in the family. The evidence suggests, however, that energy expenditures increase less than in proportion to family size. (In other words a family twice as large as another consumes less than twice as much energy.) Rebates are better suited to providing a more appropriate family-size adjustment.[7]

Payroll or Income Tax Cuts

Some have proposed using climate change revenues to cut payroll tax rates or individual or corporate income tax rates. Such options would be far less effective than a refundable tax credit in preserving the purchasing power of low- and middle-income consumers.

For example, in its analysis of trade-offs in the design of cap-and-trade legislation, CBO found that if all the revenue from auctioning emissions allowances were used to reduce payroll tax rates, households in the bottom 60 percent of the distribution would get a smaller benefit from the tax cut, on average, than they would lose from higher energy prices.[8] Those in the next 20 percent would come out even and the top 20 percent of the population would get a tax cut that *exceeded* their increase in energy costs. Using all the auction revenues to cut corporate taxes would be even more regressive, since the benefits of corporate tax cuts are concentrated still higher up the income scale. Using auction revenues to provide households rebates that vary by family size but do not increase as income climbs would not have these regressive effects.

The main argument for using climate change revenues to cut tax rates rests on the concept of economic efficiency. Economic analysis suggests that charging firms for emitting pollutants (as under a cap-and-trade system) could dampen economic activity. By cutting tax rates at the same time, policymakers could reduce these economic efficiency losses. But, as the CBO analysis emphasizes, policymakers face a trade-off between achieving efficiency gains and achieving distributional goals. Moreover, the economic efficiency gains CBO identifies are relatively modest, and the effect of the tax rate cuts that produce those modest gains would almost surely be to leave low- and middle-income consumers worse off and to cause inequality in the United States to widen further.[9]

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[7] The climate tax credit discussed in this paper would adjust for family size but would take into account "economies of scale" in meeting families' needs. In other words, a family of four would get a larger credit than a family of two, but not one that was twice as large, as would be the case under a per-capita cap-and-dividend approach.

[8] Congressional Budget Office, "Tradeoffs in Allocating Allowances for CO2 Emissions," April 25, 2007, http://cbo.gov/ftpdocs/89xx/doc8946/04-25-Cap_Trade.pdf; and "Options for Offsetting the Economic Impact on Low-and Moderate-Income Households of a Cap-and-Trade Program for Carbon Dioxide Emissions," letter to the Honorable Jeff Bingaman, Chairman, Committee on Energy and Natural Resources, United States Senate, June 17, 2008, http://www.cbo.gov/ftpdocs/93xx/doc9319/06-17-ClimateChangeCosts.pdf.

[9] For low- and moderate-income consumers not to be worse off under a proposal that uses all of the auction proceeds to lower tax rates, the additional economic activity generated by the tax cut would have to be so great that it raised workers' incomes by enough to increase their after-tax income by more than what they lose due to higher energy prices. Credible estimates of the economic efficiency gains from using climate change revenues for tax-rate reductions show those gains

A recent study by Resources for the Future reinforces the CBO analysis.[10] The study finds that the benefits of cutting marginal tax rates would mainly go to upper-income individuals. In contrast, providing rebates to low- and middle-income consumers would result in the best outcome for those consumers.

A reduction in payroll tax rates does not fare as well as a flat rebate on distributional grounds: the size of the benefit from a payroll tax cut is higher for those with higher earnings, and seniors and others without earnings would receive no rebate. The first concern can be partially addressed by switching from a cut in payroll tax rates to a rebate of payroll taxes paid up to a fixed cap. Workers above a certain modest level of earnings would all receive the same size rebate. Workers with very low earnings, however, would receive only a partial rebate, and people with no earnings would still be left out.

Those problems can partly addressed by switching to a refundable income tax credit based on the amount of payroll taxes paid (up to a maximum amount) and making seniors and people receiving federal disability benefits eligible for a similar size tax credit.[11] At that point, the modified payroll tax proposal would look a lot like our proposed low- and-middle-income rebate, although it still would leave out people who lack earnings and are not elderly or have disabilities, such as people who are unemployed during a recession and single mothers with very young children who are temporarily out of the work force. That could be addressed by including our low-income EBT proposal and by making direct payments to people receiving Social Security, SSI, VA, or Railroad Retirement.

A similar outcome could be built around President Obama's Making Work Pay tax credit. That credit would have to be paired with payments to people on Social Security, SSI, VA, and Railroad Retirement as was done in the economic recovery legislation and with our EBT proposal so as to include people who do not file tax returns. Finally, there would need to be a supplement to the Making Work Pay credit so there is an adjustment for family size and an increase in the tax credit as the emissions cap tightens and the consumer impacts consequently grow larger.

Energy Efficiency Programs

Measures to encourage or require investments in economic efficiency can reduce the overall demand for energy, thereby limiting the size of the hit to consumers' pocketbooks from increased energy-related prices under an emissions cap. But energy efficiency programs are not a credible *substitute* for rebates as a means of addressing the impact of climate change legislation on consumers' budgets.

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to be very small, however, compared with what would be needed to produce such a result. For example, in the analysis that CBO has relied upon to estimate the efficiency gains under an approach that uses all of the auction proceeds to cut tax rates, the efficiency gains would be equal to only 0.3 percent of GDP. That is far too small to offset the net loss that low- and middle-income consumers would bear as a result of losing more from higher energy prices than they would gain from the reduction in tax rates.

[10] Dallas Burtraw, Rich Sweeney, and Margaret Walls, "The Incidence of U.S. Climate Change Policy: Where You Stand Depends on Where You Sit," Resources for the Future, September 2008, http://www.rff.org/News/Features/Pages/ClimatePolicyOptions.aspx.

[11] Gilbert E. Metcalf, "A Proposal for a U.S. Carbon Tax Swap: An Equitable Tax Reform to Address Global Climate Change," The Brookings Institution (Hamilton Project), October 2007.

There are two main reasons why. First, existing weatherization and other energy efficiency programs now operate on a small scale and would likely take years to scale up to reach a substantial portion of the population. Until now, the Weatherization Assistance Program, which helps low-income households make their homes more energy efficient through measures such as better insulation and newer appliances, has served only a few hundred thousand homes a year.[12] Even if the program is expanded to the point that it reaches 1 million households a year, which would require a huge buildup in effort, it would take decades just to reach the 37 million low-income households that are eligible for LIHEAP assistance. Rebates, in contrast, can reach tens of millions of low- and middle-income people immediately.

Second, the commonly discussed energy efficiency programs generally focus on home energy efficiency. Yet higher home energy costs account for less than half of the loss in household purchasing power that would be caused by an emissions cap. To provide full relief to households, the energy efficiency measures would have to be so effective as to compensate not only for the increased costs in home energy but also for the increase in the cost of gasoline and other products. That is far beyond what is realistic.

Using Utility Companies to Provide Consumer Relief

The Lieberman-Warner Climate Security Act of 2008 (S. 3036) would have assisted low- and middle-income households by routing funds through local utility distribution companies (LDCs). Some other proposals have taken this approach as well.[13] While relying on LDCs may seem reasonable at first blush in light of concerns about increased electricity bills, this approach is fundamentally unsound for several reasons.[14]

First, utility companies do not routinely collect information on their customers' incomes. To target assistance at customers within a particular income range, utility companies would therefore have to set up new bureaucracies to collect and audit income information. Covering the large costs of building an infrastructure at each utility company to gather and verify income information for millions of customers would require substantial government subsidies. Such subsidies would pay for an infrastructure that essentially duplicates what public agencies already do. Making households of *all* income levels eligible for utility company assistance would avoid this particular difficulty. But that approach would spread the funds much more thinly across the population and make it far less likely that low- and moderate-income consumers would be adequately protected from higher prices.

Second, past experience suggests that utility company programs will miss large numbers of consumers. The only existing federal program that delivers assistance to low-income households through utility companies is the "Lifeline" telephone discount program, administered through local

[12] See the LIHEAP Annual Report to Congress for Federal Fiscal Year 2005.

[13] One of the options included in the Dingell-Boucher discussion draft legislation on climate change released in October 2008 also would have relied on LDCs to provide consumer relief, and LDC provision figures prominently in the blueprint for legislative action issued by the United States Climate Action Partnership in January 2009.

[14] See Chad Stone and Robert Greenstein, "Why Utilities Are Not Well-Suited to Deliver Relief to Low- and Moderate-Income Consumers in a Climate Bill," Center on Budget and Policy Priorities, February 18, 2008.

phone companies. That program reaches just *one-third* of eligible low-income households.[15] In addition, the sizeable share of Americans whose utilities are built into their rents could be left out if climate assistance were delivered primarily through utility companies.

Third, a utility company approach is aimed at electricity and natural gas bills, and hence fails to address the full impact of climate legislation on consumer budgets. With over half of the impact of climate change legislation on consumer budgets coming as a result of higher prices for a range of other goods and services, including gasoline and food, relying on utilities to deliver consumer relief would leave many low- and middle-income consumers with a large uncompensated hole in their budgets.

Fourth, routing consumer assistance through utility companies artificially lowers households' utility bills and blunts the "sticker shock" of higher bills. People who do not realize that energy costs are going up will be much less likely to take steps to conserve energy or seek out energy efficiency improvements. A rebate, in contrast, protects consumers' purchasing power without blunting the incentives created by higher energy prices.

Fifth, establishing a formula for allocating emissions allowances equitably among utilities would be fraught with severe difficulties. There are roughly 3,300 LDCs in the electricity sector (plus additional natural gas retail distributors not affiliated with electric utilities). As discussed above, information does not exist on the relative incomes of their customer bases, making it impossible to distribute allowances among LDCs in proportion to each LDC's share of the population being targeted for consumer relief. Making matters worse, basing the allocations to LDCs on each utility's share of total electricity delivered or total emissions — an approach often taken by legislative proposals that rely on LDCs to provide consumer relief — would shortchange utilities that serve a disproportionate number of low- and moderate- income consumers, because their consumers' per-capita energy consumption is likely to be lower than the per-capita energy consumption of more affluent households.

Sixth, a major obstacle to relying on utilities to deliver consumer relief, either through reductions in consumers' bills or through energy efficiency measures, is the uneven quality of regulation and enforcement of utilities across the states. Most utility customers are served by investor-owned utilities whose rates and practices are regulated by state public utilities commissions. Regulators have to work closely with the industry they oversee, and states vary considerably in the degree to which the regulators have successfully avoided being "captured" by the industry. In such a heterogeneous regulatory regime, it would be difficult to provide the federal oversight necessary to make sure that the federal revenues from auctioning emissions allowances are used appropriately to protect consumers and invest in cost-effective energy efficiency improvements.

Finally, policies that suppress consumer price increases in the electricity sector — as the utility company approach would do — blunt incentives to reduce fossil fuel use in that sector. That keeps electricity demand elevated and puts a greater burden on other sectors to provide the emissions reductions required to meet the cap. The result is that emissions reductions would be more costly to achieve, and allowance prices consequently would be higher. Consumers would pay less for

[15] Matt Fiedler, "Lessons from The Telephone Lifeline Program," Center on Budget and Policy Priorities, July 18, 2008. Available at http://www.cbpp.org/7-18-08climate.pdf.

electricity, but they would pay *more* for other forms of energy and energy-related products, which account for more than half of the impact on their budgets. Only a portion of the overall hit to consumers' budgets would be mitigated by this inefficient use of tens of billions of dollars of allowance value.

Conclusion

Climate change legislation that limits greenhouse gas emissions need not squeeze the budgets of low- and middle-income families. Well-designed consumer relief can restore to these families the purchasing power that they would lose as a result of higher prices for energy-related products. In addition, consumer relief can be financed with a portion of the revenues from the auctioning of emissions allowances under a cap-and-trade system, leaving significant auction revenues available for other climate-related priorities.

A new refundable climate tax credit (including a modified version of the President's Making Work Pay tax credit), coupled with Electronic Benefit Transfers for the lowest-income households, would be the most effective way to provide consumer relief to low- and middle-income households. Other proposed mechanisms suffer from significant flaws. Cutting income or payroll tax rates would not have large enough effects on economic activity to offset the fact that these approaches would be quite regressive, providing the largest benefits to higher income households and leaving low- and middle-income households worse off as a result of the emissions cap.

Filtering consumer assistance through utility companies — or relying solely on weatherization and related efforts to make homes more energy efficient — also would have very serious weaknesses, as these approaches would either bypass many families affected by higher home energy costs or provide them with inadequate relief. Moreover, such approaches would not address the increases that would occur, as a result of climate change measures, in prices for energy-related products *other than* household utilities. Both approaches also would require substantial expansions in government regulation.