The creation of a cap-and-trade system is being considered regionally and nationally as a strategy to reduce greenhouse gas emissions and stem climate change. By putting a price on pollution, such a system would encourage energy efficiency and the substitution of low-carbon alternatives for fossil fuel. This will help prevent extensive environmental and economic damage from climate change. Such a policy would necessarily increase the costs of goods, from household energy to gasoline to food.

Low and moderate income households are most vulnerable to these cost increases, since they spend a larger portion of their income on essentials, like energy, than wealthier households. Fortunately, a well designed cap-and-trade system can also include a mechanism to offset the average impact of higher energy costs on these households. In this way, climate policies can simultaneously address climate change and shield low and moderate income households from increasing costs. This paper provides guidelines for designing an effective climate rebate program to accomplish this.

By including a climate rebate program as a component of a cap-and-trade system, the health of people and our environment can be protected without overly straining household budgets. An effective climate rebate program would:

- Utilize existing structures such as the tax system, federal benefit programs, and state human service agencies to reach eligible consumers;
- Automatically offset the average cost increases for most low and moderate income households; and
- Be fully funded by revenue generated from auctioning emission permits.

**Current Legislative Efforts**

Regional efforts in North America to establish cap-and-trade systems include the Midwestern Greenhouse Gas Reduction Accord, the Regional Greenhouse Gas Initiative, and the Western Climate Initiative. While the Regional Greenhouse Gas Initiative is the only system that is currently operating, all three initiatives demonstrate state-level commitment to taking action against climate change.
How to Lower Costs of Climate Change Policies for Consumers

During Washington State’s 2009 legislative session, the Governor introduced a bill that would have created a cap-and-trade system in Washington State, thus enabling state participation in the Western Climate Initiative’s regional system. The Governor’s bill would have been among the first in the nation to explicitly prioritize lower income consumers when allocating auction revenue from a cap-and-trade system, an innovation that resulted from the combined efforts of a broad coalition of stakeholders representing environmental, faith, and social justice organizations.

The Governor’s proposal was not enacted and the session adjourned without decisive action on climate change. Focus has now turned to the federal level for leadership in this area.

President Obama has signaled his support for cap-and-trade legislation, in part by including revenue from an anticipated federal climate bill in his budget proposal. Movement has likewise been seen in both the U.S. House of Representatives and Senate. Last spring, the Senate briefly debated a federal cap-and-trade bill. While the bill did not come to a vote, Senate Majority Leader Harry Reid has said that the Senate plans to consider climate legislation again this year. The House Energy and Commerce Committee is in the process of marking up comprehensive climate legislation for consideration by the full House this summer. Unfortunately, some of the proposals currently under consideration in Washington, DC, do not adequately address the regressive financial impact climate policies will have on lower and moderate income households.

How Does Cap-and-Trade Work?

The purpose of a cap-and-trade system is to reduce and regulate the emission of greenhouse gases and to create market incentives for individuals and companies to conserve energy, invest in energy efficiency, and utilize clean energy alternatives. Under such a system, a cap (either national or regional in scope) is established that limits the amount of greenhouse gas emissions permitted over a period of time. The emissions allowed under the cap are represented by permits, usually equal to one ton of carbon dioxide equivalent. These permits are distributed to energy producers and suppliers, and each permit authorizes its holder to emit a specific amount during a specific period of time. Firms may buy and sell permits among themselves, but they are periodically required to submit permits equal to their emissions. If firms do not have enough permits, they will be fined.

A key variable of a cap-and-trade system is the strategy used to distribute emission permits. Permits can be auctioned or given to firms for free. Auctioning 100 percent of emission permits would create substantial revenue that could be used to fund public interests. In contrast, if permits are given away to companies free of charge with no restrictions on their use, most companies will tend to experience large profits at the expense of consumers. Indeed, companies will raise their prices due to the restrictions on emissions, regardless of whether permits are freely given or sold at auction.1 When the European Union implemented its Emissions Trading Scheme, this is precisely what happened. Although polluting companies were given emission permits for free, they raised prices to reflect the market value of their permits and made significant profits.2 If permits are not auctioned, however, the government will not have the resources to offset these price increases.

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An effective climate bill could create protections and generate opportunities for people with lower and moderate incomes. The guidelines outlined in this paper provide a framework for how a climate rebate assisting lower and moderate income households can be integrated into federal climate policy.

### Climate Policy & Household Budgets

A cap-and-trade system would lower greenhouse gas emissions by restricting the quantity of emissions allowed over a period of time. This restriction would lead to increases in the price of fossil fuel and energy-intensive goods, such as food. Such price increases would help motivate consumers to conserve energy and invest in energy-efficient products and technology. While raising the price of carbon-intensive energy is central to reducing greenhouse gas emissions, any carbon-pricing policy will disproportionally affect lower and moderate income consumers.

Consumers with lower and moderate incomes spend a larger share of their household budgets on energy and energy-intensive products than higher income consumers. Research has found that households in the lowest income quintile spend an average of 21 percent of their income on energy and related products compared to 4 percent for households in the highest income quintile.

A cap-and-trade system has the potential to exacerbate financial hardships for lower and moderate income families. For example, one analysis projects that a relatively modest 15 percent reduction in emissions will cause an average cost increase of roughly $750 per year for households in the lowest income quintile. With an average annual household income of $15,000, such a cost increase would be a sizeable burden for these families. Moreover, these costs will rise over time as the emissions-control targets become stricter.
In addition to increased financial hardship, lower income families face barriers to transitioning to an economy that rewards energy efficiency. Many energy-efficient appliances are costly and are likely to be unaffordable for this group. Also, many lower income households are renters and depend on landlords to weatherize and update their residences. If tenants pay their own utility bills, landlords may be reluctant to modernize buildings to improve energy efficiency. Fortunately, well designed climate policy also provides the resources to offset these impacts without compromising environmental protection goals.

### Necessary Components of a Climate Rebate

As Congress deliberates, there are several key criteria that should be part of any climate policy:

- At a minimum, a climate rebate should offset the average cost increase for lower and moderate income households in the first and second income quintiles;
- A climate rebate should be tied to household size, since larger households will bear greater costs than smaller households;
- A climate rebate delivery mechanism should be multifaceted in order to reach as many eligible consumers as possible. Using the tax system, federal benefit programs, and state human service agencies would achieve this goal;
- A rebate delivery mechanism should be well coordinated to prevent overlap in rebate distribution; and
- A climate rebate should be funded from emission permit revenue.

Using cap-and-trade auction revenue, a climate rebate could help offset energy cost increases for lower and moderate income households by distributing a cash rebate through existing benefit and tax structures.

At a minimum, a climate rebate should offset the average loss of purchasing power experienced by households in the lowest two income quintiles.

While it is impossible to offset the specific costs of climate legislation for each individual household, we recommend offsetting costs for the average household of a particular size. This reflects the fact that larger households will bear greater costs since families with several children will generally consume more energy.

The consumer relief component of climate legislation will have to employ more than one delivery mechanism to ensure that it reaches as many low and moderate income households as possible. In particular, relying on the income tax system alone would be inadequate, since many lower income consumers do not have to file a tax return. Instead, a combination of
Utilities Are a Limited Option for Offsetting Increased Energy Costs

Relying on utility companies to deliver consumer assistance has emerged as one strategy to offset energy cost increases under a cap-and-trade system. If enacted, local utility companies would be given a portion of emission permits for free and would be required to use these permits to keep customers’ utility bills artificially low. This approach has a number of serious shortcomings.

To begin with, an important strength of a climate rebate is its ability to specifically target lower and moderate income households. This is important since these consumers will experience the greatest cost impact and are the most vulnerable financially. Because utilities do not collect information on their customers’ incomes, they would not be able to target assistance to those most in need. As a consequence, limited funds would be more thinly spread across all households.

Utility bills account for less than half of the total rise in energy costs for lower and moderate income households. Over 50 percent of the cost impact experienced by these consumers would be due to increases in the price of gasoline and other products, like food, that require energy in their manufacture or transport to market.¹⁰

An approach that attempts to deliver consumer relief through utilities would reduce the incentive for consumers to conserve energy. A goal of carbon-pricing policies is to help motivate consumers to reduce their energy consumption by raising energy prices. Without this price signal, consumers are unlikely to consume less electricity, requiring greater reductions in carbon emissions from other sectors to satisfy the requirements of the pollution cap. Though consumers’ utilities bills will stay low, they will face greater price increases on gasoline and other energy-intensive products.

A utilities approach would rely on state regulators to direct consumer assistance. Since there is uneven oversight of utility companies across states, it would be difficult to ensure that all eligible consumers receive uniform and effective assistance.

Consumers whose utilities are built into their rents might not receive adequate compensation since they do not directly pay utility companies. Therefore, providing consumer assistance through a climate rebate would be a more straightforward and effective strategy.
three delivery systems would be highly effective in reaching eligible consumers. The Center on Budget and Policy Priorities estimates that this hybrid climate rebate delivery model would automatically reach 95 percent of households in the bottom income quintile and 98 percent of households in the second and third lowest income quintiles.10

Using the Tax System

The tax system can be used to deliver climate rebates to qualifying households that file an income tax return. Similar to the federal Earned Income Tax Credit (EITC), a climate rebate would be distributed in the form of a refundable credit. At the state level, the Working Families Tax Rebate could be used in place of the EITC to deliver a climate rebate.

Although this delivery system would be highly efficient, some lower and moderate income consumers would not be reached. Approximately 15 percent of U.S. households do not file income tax returns.11 Thus, an additional delivery system is needed to reach these consumers.

Using Federal Benefit Programs

Relying on federal benefit programs in addition to the tax system to deliver climate rebates would help reach people who do not file income taxes, including some seniors, veterans, and people with disabilities. Under this model, the Social Security Administration, the Department of Veterans Affairs, and Railroad Retirement program would deliver climate rebates to Social Security recipients, Supplemental Security Income recipients, veterans, and Railroad Retirement beneficiaries.

Using State Human Service Agencies

In order to reach low income households missed by the tax system and federal benefit programs, state human service agencies could deliver climate rebates through the Electronic Benefit Transfer (EBT) system. The EBT is a debit card used in every state to distribute food stamps and other benefits to lower income households. A climate rebate could simply be added to lower income consumers’ monthly benefit transfer. Together, all three delivery systems would be highly effective in reaching eligible consumers.

This hybrid approach is particularly attractive because it relies on existing, proven delivery mechanisms, rather than creating a new bureaucracy. In this way, assistance can be directed to low income families, rather than administrative costs and paperwork.

Addressing Program Overlap

It would be important to ensure that households do not receive climate rebates through more than one of the three avenues listed above. This could be achieved by using data already accessed by state human service agencies regarding their clients’ income sources. State agencies could avoid distributing climate rebates to households that receive benefits from federal benefit programs, such as social security. Additionally, state human service agencies and federal benefit programs could issue annual tax reports to their beneficiaries. Households that receive benefits through these programs and file income tax returns would be required to report their climate rebate when filing taxes. Under this model, eligible tax filers would only receive a climate rebate if they had not already received one from another delivery program.
How to Lower Costs of Climate Change Policies for Consumers

How to Pay For a Rebate Program

As noted earlier, auctioning emission permits is key to raising funds to support public interests, such as a climate rebate. The revenue generated from auctioning emission permits would fully cover the cost of providing a climate rebate. The actual cost of a climate rebate program would vary depending on the scope of the program and size of the rebate delivered to consumers. For instance, if only the average cost increase was offset for the lowest income quintile, 14 percent of the total emission permit value would be needed to support this climate rebate.\(^\text{12}\)

Conclusion

With new climate legislation on the horizon, it is important that the impacts on households with lower and moderate incomes are prioritized. A climate rebate program will provide assistance to families and will prevent further financial hardship. Furthermore, a climate rebate will be simple to implement, straightforward to pay for, and will reach virtually all eligible families.

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Figure 2: Share of Total Emission Allowance Value Needed to Fund A Climate Rebate for Varying Income Quintiles

![Figure 2 Diagram](image-url)
Endnotes


2. Ibid


11. Ibid