

DC Carbon Fee-and-Rebate Policy: A Macroeconomic Analysis

There is a proposal in the District of Columbia to put a price on global warming pollution and recycle the revenue raised back to residents, small businesses, and green investment initiatives. An independent analysis conducted by the Center for Climate Strategies found that the District can effectively reduce carbon emissions through a carbon price signal while maintaining projected economic growth and job creation, and putting more money in the pockets of DC residents.

Enacting a Carbon Fee-and-Rebate Policy in DC would:

Address Climate Change: Greenhouse gas emissions from the use of electricity, natural gas, and home-heating fuel would fall 23% relative to a business-as-usual baseline by 2032. Transportation emissions would fall by approximately 6-10% of DC's current level. These reductions are due to decreased energy consumption, a shift to cleaner power, investments in efficient equipment and buildings, and the use of more fuel-efficient vehicles and public transportation. Emissions would fall both in response to the carbon price and as a direct result of increased funding for green energy and energy-efficiency initiatives.

Boost Income for DC Residents: The majority of the carbon revenue raised would be returned to every DC resident through a monthly "rebate." Low-income residents would be reimbursed at a slightly higher rate than other residents. The analysis projects that, by 2032, the policy would generate a rebate of \$160 per month for the average family of four (adding up to \$1,920 per year) and \$277 per month for a low-income family of four (adding up to \$3,324 per year). This gradually rising rebate would increase residents' support, thereby increasing the policy's durability.

Cut Costs for Businesses: A portion of the carbon revenue would be directed as tax relief to small businesses. This will total \$30 million per year by 2032, thus enhancing the ability of local businesses to remain competitive in the region and to maintain a permanent and robust presence in the city.

Maintain a Healthy Economy: A steady boost in jobs will result from the policy, with over 500 net new jobs in 2032 alone. The construction sector would see especially positive job growth and revenue increases thanks to green investments. The retail, restaurant and bar sectors would also prosper as consumers spend their rebate in consumer-facing sectors of the economy. Net changes to overall GDP, total output, and total value added in the DC economy remain virtually unchanged from the current business-as-usual economic growth projections. Economic growth, in other words, will continue even as emissions fall significantly.

How the Study was Conducted

The greenhouse gas emissions reduction impacts of the policy were projected using the Carbon Tax Assessment Model (CTAM) developed by the Washington State Department of Commerce, modified to represent DC's energy sector. CTAM is a flexible open-source model that quantifies the greenhouse gas and fiscal impacts of a carbon fee on a state or region's primary energy sectors.

These direct, policy-induced changes in spending and revenue use were then used to assess the policy's impact on the broader economy using the Policy Insight & Macroeconomic model designed by Regional Economic Models, Inc. (REMI). This is a tool in wide use by governments and institutions throughout the U.S. This step modeled the indirect and induced changes that occur throughout all sectors of the DC economy as businesses, households and the government respond – not only to the fee itself, but also to the newfound money available from the return of that fee every month.