PUT A PRICE ON IT D.C.

FAQ Carbon Fee & Rebate Proposal

DC Put a Price on It Campaign

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A. Carbon Fee Design

1. How much is the carbon fee? What's the rate of increase?

The proposed policy would impose a $20 price per ton of CO_2 in 2019. The price would affect behavior by rising annually $10 until hitting a cap of $150 per ton in 2032. This price level has been proposed based on the best current economic and climate science expertise, taking into account other national and sub-national carbon pricing proposals.

2. Who pays the fee? How is it collected?

The proposed policy would apply to natural gas and oil consumed in the District as well as carbon-intensive electricity and emissions linked to transportation (exempting public transit).

- For natural gas, the local distribution company providing gas would pay the fee, which would be based on the carbon content of each cubic foot of natural gas sold to customers.

- For carbon-intensive electricity, all suppliers of electricity to end users would pay the fee, calculated based on the total number of kilowatt-hours sold to customers minus the kilowatt-hours for which the supplier has purchased renewable energy credits (RECs) or entered into long-term contracts for clean energy.

- To price transportation-related carbon emissions, a gradually rising fee would be established for parking meters and commercial parking garages. There would also be a variable excise tax/excise tax rebate for vehicles based on fuel efficiency relative to the federal Corporate Average Fuel Economy (CAFÉ) standard. Vehicles below the CAFÉ average would pay a one-time tax based on how far below they are, and more efficient vehicles would receive a rebate on the existing excise tax. Because the CAFÉ standard rises over time, this presents a gradually rising price signal. A direct fee on motor fuels was considered and rejected due to the high potential for leakage and its potential regressive effect on lower-income households. Importantly, public transportation would be exempt from paying the carbon price for the portion of their business that provides public transport.

A fee on motor fuels will be established if Virginia and Maryland do the same. Importantly, public transportation would be exempt from paying the carbon price for the portion of their business that provides public transport.

B. Use of Proceeds

3. How much revenue would this policy raise?

In its first year, the carbon fee would generate about $141 million dollars. Economic models predict that revenue would top off at $596.5 million when the fee plateaus in 2032.

4. How would this policy mandate that revenue be used?

The bulk of revenue (about 75%) would be rebated directly in the form of a regular electronic bank transfer or check to all DC residents. 5% would be returned to local businesses, while the remaining 20% would be used to strengthen and modernize our economy through investment in clean energy projects.

5. How does the policy ensure that all people are able to take advantage of the rebate?

All District residents will be eligible for the rebate. Those who are registered to vote in the District or who are 18 or older and who hold a valid DC driver's license or photo ID shall be presumptively considered residents. The bill would direct the District Department of Energy and Environment (DOEE) to make every reasonable effort and work with other agencies as needed to ensure that every resident receives a dividend. Their outreach efforts, and partnerships with outside groups to help register all eligible residents, would focus on those residents who are not presumptively registered based on the above criteria.

6. If this policy is meant to reduce greenhouse gas emissions, why doesn’t it invest all revenue raised in renewable energy and efficiency projects?

While more investment in renewable and energy efficiency could lead to greater emissions reductions, this policy is not designed to increase the tax burden of DC residents. Instead, it complements DC’s existing sustainability policies - such as a robust renewable portfolio standard (RPS) that requires the district’s utilities to source 50% of their electricity from renewable sources by 2032. An economy-wide carbon price will create a powerful price signal that benefits all forms of clean energy and provides funding for new clean tech initiatives, while leaving the vast majority of DC residents ahead economically.

7. Does this policy include a specific rebate for commercial emitters?

While most commercial sector entities would not receive a dividend payment, 5% of funds collected would be destined to directly benefit small businesses, whether in the form of tax breaks, lump-sum rebates, or energy technology assistance. The legislation would also set aside 20% of the revenue to make investments to accelerate DC's transition to a clean energy economy. Many of these investments will go into the commercial sector so that businesses can lower their carbon emissions and their utility bills using clean and efficient energy.

8. How can taxpayers ensure that revenue raised is used responsibly?

The Public Service Commission (PSC) oversees collection of monies, which are subsequently administered by the DOEE. A review will be conducted every four years that will report on the overall effectiveness of the Climate Change Action Fund, and verify that Fund resources are being used to meet the purposes set out for it.

9. How will this policy affect people who are in apartments that are not separately metered?

In buildings where renters do not directly pay for utilities, the carbon fee will create an incentive for building owners to invest in greater energy efficiency. A building with lower energy costs due to renewable energy or energy efficiency could be attractive in DC's high cost rental market and increase property value. Furthermore, the bill directs DOEE and an advisory committee to identify and implement actions that provide building owners with incentives to reduce energy costs in master-metered buildings and share those cost savings with building occupants using a portion of the revenue that is dedicated toward making green investments in DC's clean energy economy.

Also, residents in master-metered buildings will receive equal rebates irrespective of whether these energy improvements occur.

C. Impact on DC Greenhouse Gas Emissions

10. Will this policy meaningfully reduce greenhouse gas emissions in line with the District's stated sustainability goals?

The District of Columbia has committed to reducing greenhouse gas emissions 50% below 2006 levels by 2032. 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. That means that this one policy could help us achieve almost half of our pledged greenhouse gas emissions reductions. That's important, because currently we are not on track to meeting our commitments, and need to employ the most powerful tools available.

Other jurisdictions have reduced greenhouse gas emissions using carbon prices. In 2008, British Columbia passed the Carbon Tax Act to levy a fee on the greenhouse gas content of nearly all fuels purchased within the province. The Provincial Government's 2008 Climate Action Plan predicted that the tax could reduce GHG emissions in 2020 by up to 3 million metric tons of CO2 -equivalent annually, or roughly a 5% decline compared to the reference case forecast. A 2015 report by Duke University's Nicholas Institute for Environmental Policy Solutions and the University of Ottawa's Institute of the Environment and Sustainable Prosperity found that British Columbia reached or exceeded that goal. Based on a literature review of seven studies analyzing the GHG impacts of the carbon tax, they determined that "the effect of the tax was to reduce fuel consumption and GHG emissions 5–15% in British Columbia."

In fact, a 2013 article published in *Canadian Public Policy* showed a roughly 19% reduction in per capita sales of fuels subject to the tax over the 2008–2012 period relative to fuel sales in other Canadian provinces. Importantly, the study found that for fuels not subject to the carbon tax, such as aviation fuel, there was no reduction in use.

When evaluating the impact of carbon pricing, the University of Ottawa found that British Columbia's carbon tax caused a decline in gasoline demand that is 5 times greater than would be expected from an equivalent increase in the market price of gasoline. Whereas a five cent increase in the market price of gasoline might yield a 2.2% reduction in gasoline consumption in the short-run, a 5 cent increase to the cost of gasoline due to the carbon tax, a level approximately equal to a carbon price of $25 per metric ton, generates a 10.6% short-run reduction in gasoline demand. The authors concluded that individuals respond to the carbon tax itself in addition to the actual price changes attributable to the carbon tax, and that this "tax saliency" explains the majority of the emissions reductions attributable to the tax.

11. How will this policy impact the mix of energy sources used currently in the District?

The policy is expected to create an incentive for consumers to switch to suppliers of carbon-free electricity or invest in onsite generation from renewable sources. Utility response could lead to fuel switching away from fossil fuels, leading to a 23% reduction in emissions.

Consumption of fossil fuels for transportation are expected to fall, resulting from the use of more fuel-efficient vehicles and greater use of public transportation.

12. Currently, what's the fuel mix of our grid operating system (called PJM)?

DC is part of the PJM interconnection, which coordinates the movement of electricity in 13 states and the district of Columbia. In 2016, coal-fired and nuclear power each contributed a bit over a third of the electricity, followed by natural gas generation, which provided a little more than a quarter of the load. Renewable energy sources made up less than 5% of total generation.

2016 PJM Fuel Mix (from PJM-GATS System Mix by Fuel data, 2016)	
Fuel Type	**System Mix (Percent)**
Nuclear	34.7%
Coal	34.3%
Natural Gas	26.3%
Petroleum	0.2%
Hydroelectric	1.0%
Solar	0.1%
Wind	2.2%

Wood	0.2%
Other	0.9%

13. What changes can a company or household make to increase efficiency and reduce the burden of this carbon fee?

Within the electric sector, fee avoidance options include energy efficiency, installing solar energy or some form of carbon-free distributed generation on your home or business, subscribing a community solar project, or signing up for a competitive supplier option that procures high levels of renewable energy credits (RECs) or procures clean energy directly through a long-term contract.

Within the heating sector, fee avoidance options include energy efficiency, switching to efficient electric heat paired with the electric sector tax avoidance options, and potentially switching to lower carbon heating options such as waste heat from sewage systems and wastewater treatment plants or buying "renewable natural gas" from bio-digesters, generated either within the District or from outside. Existing DC services, such as the Sustainable Energy Utility can help residents, improve efficiency and reduce their energy costs.

Within the transportation sector, tax avoidance options include driving less, taking public transportation, and buying a fuel efficient, hybrid, or electric vehicle.

D. Impact on the Local Economy

14. How much more will a DC business pay in annual taxes under this policy?

The District of Columbia's economy is robust and diverse, so a carbon fee and rebate policy will impact different businesses and different sectors differently. Modeling shows that commercial entities could pay 15 to 20 percent more for each unit of electricity they purchase – but that figure doesn't account for the change expected in the District's energy mix. Overall, since most businesses will pass some of the cost back to consumers, and since consumers will have more money in their pockets due to the significant rebate component of the policy, business will benefit from increased liquidity in the local economy. Additionally, a full 25 percent of revenue will be reinvested in the District (20 percent in green infrastructure and 5 percent in the form of tax benefits), which will help offset additional costs incurred.

15. What impact will this policy have on jobs in the District?

Given that the proposed policy reinvests a full 20 percent of revenue into clean energy and energy efficiency projects, a carbon fee and rebate would create many green jobs in the District. Recent modeling shows the policy could yield between 100 and 400 new green jobs annually, reaching 500 new jobs per year by 2032.

16. What about leakage? Will this policy force businesses to move out of the District? How will small businesses be protected?

A portion of the carbon revenue would be directed as operating-cost 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, reducing the pressure they might feel to move out of the district, and helping them to maintain a permanent and robust presence in the city.

17. Given that some of the revenue raised comes from transportation, is this policy really just a commuter tax in disguise?

The proposed fee would apply to equally to anyone who parks, and for whatever reason they travel, not just work trips for residents of Virginia and Maryland. DC residents, tourists, commuters, visitors for planned special events, etc. all pay for the choice to drive, and thus are incentivized in this way to carpool, shift mode, and combine trips. A commuter tax, in contrast, would discriminate based on origin or vehicle registration, or both.

18. How will this policy impact Pepco-Exelon decision-making?

The carbon fee requirement is on all suppliers of electricity, not the local distribution utility. Pepco/Exelon will need to pay a carbon fee based on the carbon content of their Standard Offer Service (SOS) electricity load. All other suppliers of electricity will also pay the carbon fee based on their respective electricity loads. Suppliers would incorporate the cost of the carbon fee into their electricity supply rates. Because DC is a competitive retail electricity market, this will provide an incentive for suppliers to secure cleaner sources of energy so that they can avoid the carbon fee and offer lower rates for customers.

E. What The Carbon Rebate Means for You

19. How much more will DC households pay for electricity under this policy?

It depends on how much energy a household uses, and how much of their electricity comes from clean, untaxed sources. Modeling shows that average residential power bills will increase by roughly $9/month by the early 2030s. Avoidable rate increases will occur more gradually than has happened in the past when no local climate policy was in place, such as in the 2004-2008 period. In this case, individuals and firms who reduce their energy use or switch to renewable energy will see less of an increase or no increase at all.

Even with an expected increase in electricity bills, when accounting for the rebate, we expect that three-quarters of District residents will come out ahead – making money, not losing it. The average resident will receive about $2 in rebate for every $1 they pay in, and low-income residents will receive about $4 in rebate for every $1 in fee.

20. Who will bear the majority of the cost of this policy?

DC's non-residential energy consumers will bear most of the cost. That is why the policy is designed to provide funds and assistance for mitigating these costs through energy efficiency investments, tax credits or direct rebates, and other supportive efforts.

21. How are low- and moderate-income residents protected from increased costs under this policy?

All district residents will receive a carbon dividend, but given that low- and moderate-income residents spend a higher percentage of their income on fuel and energy-intensive goods, those residents will receive a bonus rebate under the proposed policy. Because of this, the poorest will actually receive more money than they spend in increased electricity prices (about $4 in rebate for every $1 in fee). Eligibility for the bonus dividend will be determined by rules governing other programs aimed at supporting low and moderate-income residents, like LIHEAP.

Importantly, the dividend amount is not tied to energy use. We are all stakeholders in the fight against climate change, and deserve to be compensated for the negative impacts caused by greenhouse gas emissions. Furthermore, people should be encouraged to move toward clean energy, and removing the dividend could be a potential disincentive to making that switch.

The bill would presumptively consider all registered voters and all persons 18 years of age or older who hold a valid driver's license or photo ID as "residents" eligible for a dividend. The policy would also direct DOEE to make every reasonable effort and work with other agencies as needed to ensure that every resident not presumptively considered "resident" receives their dividend.

22. How often will households receive the rebate? How will that timing impact residents living paycheck to paycheck?

15% of the rebate will be distributed specifically to low-income residents, in addition to their share of the 85% of the rebate that will be distributed equally, and to everyone, on a monthly basis. For the low-income portion, the Department of Energy and Environment will be directed to work with the Department of Human Services to determine the manner and frequency in which the rebate is delivered.

23. Will the rebate low- and moderate-income families receive under this policy affect their eligibility for other public benefits?

It is important that this policy not interfere with existing public assistance benefits provided to low- and moderate-income residents of the District. Policymakers are currently engaged in conversation to ensure the proposed policy prevents those residents from losing existing benefits. The bill also requires that DOEE and the Department of Human Services coordinate delivery of carbon rebate with other existing programs that provide resources to low-income residents so as to reduce confusion for residents.

F. Policy Interactions & Complementary Policy

24. DC already has clean energy policy on the books. Why is another policy tool needed?

The District of Columbia has ambitious sustainability goals, but we are not on track to meet them. On our existing policy pathway, the District would achieve an 18% reduction in energy use, with renewables making up only 32% of our energy mix by 2032 – far short of our 50% goals. While we are capable of achieving our targets, success will depend on enacting a suite of new policies that do not yet exist and are unfunded in the District, particularly for transportation and heating buildings. The Clean Energy DC Plan outlines some of what's needed including deep energy retrofits of existing buildings and federal Corporate Average Fuel Economy (CAFE) standards, but DC currently spends a fraction of what's needed to conduct deep energy retrofits and federal regulations like CAFE are at risk under the Trump Administration.

The District of Columbia Green Finance Authority Establishment Act of 2017 is a good first step toward establishing a green bank that could take on some of the heavy lifting needed to meet our sustainability goals, but that legislation is not sufficient to establish a fully funded and effective green bank. And other supplemental programs in addition to the green bank will likely be needed to achieve DC's goals.

In other words, other policies are needed to fill the gap. A price on carbon will create an economic incentive to reduce emissions from the electricity, heating, and transportation sectors, and will also create a revenue stream that can be used to fund programs needed to implement the Clean Energy DC Plan.

25. Will existing sustainability programs remain, or does this policy swap out for some of them?

DC's existing policies are important, but, as described above, on their own they are insufficient to achieve the District's climate and sustainability goals. This policy is being proposed to complement DC's existing sustainability programs, not replace them, and to help us achieve our overall sustainability objectives. A list of some of those policies are included here, with particular protections for low-income and small businesses. But all of these programs need sustainable funding - some of which can be generated by pricing carbon pollution - and they need to be expanded to include clean transportation and heating programs.

* *Low Income Home Energy Assistance Program (LIHEAP)* ~$20M/year directly assist low-income residents with utility bills.

* *Sustainable Energy Utility (SEU)* ~$5M/year to specifically reduce low-income household energy bills through improved efficiency, ~$5M/year to help commercial buildings with energy efficiency.

* *Solar for All* ~$10M-$20M/year for DOEE's Solar for All program that's required, by law, to cut energy bills 50% for low-income residents (100,000 total residents) by 2032.

* *Green Bank* $7M+/year will help commercial buildings finance clean energy solutions.

* *Property Assessed Clean Energy (PACE) bonds* The PACE financing mechanism helps commercial buildings finance energy efficiency and renewable energy solutions.

26. How will this policy interact with the Renewable Portfolio Standard?

A carbon fee will create an economic incentive for suppliers to provide their customers with electricity from renewable sources, to complement the existing regulatory mandate created by the RPS. This could

encourage faster achievement of the RPS goals, or even overachievement. A number of jurisdictions have carbon pricing mechanisms that complement their RPS (or similar policies), including the state of California, Chile, and many European countries. Achieving or overachieving the RPS will reduce the carbon price that electricity suppliers pay--creating overall savings and cleaner power for ratepayers.

Furthermore, this policy creates an economy-wide carbon price while the RPS only applies to the electricity sector. A carbon price will complement and expand upon the RPS's electricity sector emissions reductions, while create new incentives to reduce emissions from the heating and transportation sectors.

27. What does DC DOEE leadership think of this proposal?

DC DOEE leadership have been crucial in building a path towards a clean and sustainable DC, but they have indicated that more community input is needed before they weigh in on the proposed policy.

G. Examples of Carbon Pricing Elsewhere

28. Has this successfully been implemented elsewhere?

Carbon pricing exists in many states and countries throughout the world. In the U.S. the most robust carbon pricing programs are in California and among the nine Northeastern and Mid-Atlantic states that make up the Regional Greenhouse Gas Initiative (RGGI). Boulder, CO also has a carbon tax on electricity at the city level.

In neighboring Canada, British Columbia has had an economy-wide carbon fee levied on the greenhouse gas content of nearly all fuels purchased within the province since 2008. Studies have found that the carbon price led to a roughly 20% decline in fuel usage, even as the Province's economy grew faster than the rest of Canada. Following British Columbia's lead, carbon prices have now been introduced in Alberta, Ontario, and Quebec, and the national government intends to institute a national carbon tax plan in 2018.

Globally, carbon prices also exist in Mexico, Chile, Sweden, Switzerland, Denmark, France, UK, South Korea, Japan, New Zealand, the European Union, and within several Chinese provinces.

Recently, California's Senate President introduced legislation to significantly increase its carbon price while rebating the majority of the revenues back to residents in the form of a quarterly dividend. Similar economy-wide carbon fee-and-dividend proposals have also been introduced in Massachusetts, Vermont, Rhode Island, New York, and Oregon.

29. Why carbon fee and rebate, rather than join a cap and trade system?

Cap and trade systems are an important tool in reducing greenhouse gas emissions. DC neighbors the nine states of the Regional Greenhouse Gas Initiative (RGGI), which caps emissions from the electricity sector and has auctions for tradable emissions allowances. There have been suggestions in the past that DC join RGGI. However current allowance prices are too low to have any significant impact on behavior (less than $5 per ton). Additionally, under RGGI the obligation falls on fossil-based power generators, and nearly all of DC's electricity is imported from other states.

30. Why not replicate the carbon tax in Boulder, CO?

Since 2006, Boulder, CO has had a carbon tax levied on electricity consumption that acts as a funding mechanism for the city's Climate Action Plan. That plan is Boulder's blueprint to reduce overall emissions by 80 percent by the year 2050 from a 2005 baseline.

Boulder's tax is structured differently than the carbon fee and rebate policy being proposed in the District. As a $/kWh tax on electricity consumption, the tax is applied directly to consumers after the city's utility, Xcel Energy, has already purchased its electricity supply. So rather than change utility or power plant behavior, Boulder's tax acts as an education tool for consumers to lower their carbon footprint and a revenue source for green programming. These programs include energy efficiency in homes and buildings, renewable energy grants and rebates, and reducing emissions associated with transportation and solid waste.

By contrast, the proposed carbon price in Washington, DC would apply to natural gas and oil consumed in the District as well as carbon-intensive electricity and emissions linked to transportation (exempting public transit). And rather than set $/kWh tax based on the volume of electricity consumed by customers like in Boulder, the District's carbon fee would change based on the carbon content the the electricity consumed in DC. DC's proposed carbon price would thus be an incentive to switch to cleaner fuels and reduce emissions from non-electricity sources like heating and transportation, while Boulder's carbon tax is non-bypassable charge on electricity that applies even if one switches to cleaner energy.

Finally, Boulder is in a different situation than DC in that their carbon tax is a critical funding stream for their green programming. DC, on the other hand, has multiple funding streams for its green programming including the RPS, Solar for All, and the Sustainable Energy Utility. Because DC already has a firm clean energy funding stream, the DC carbon fee and rebate policy can use more of the revenue to put money back into the pockets of DC residents.

H. The District of Columbia and Federal Control

31. Will the federal government have to pay under this policy? How does this impact the GSA?

Federal government agencies will pay indirectly, as they will be subject to the same energy price adjustments as other consumers in the city.

32. Isn't this a redistribution of wealth from U.S. taxpayers at large to the District?

Given that a portion of the carbon price is borne by federal agencies, and the revenue will largely be returned to DC residents, proposed policy could be characterized as such. But given that the federal government's consumption of dirty energy impacts DC residents' health every day, this is simply a common-sense way to price the externality of carbon pollution.

32. Won't any carbon pricing policy we pass in the District be struck down in Congressional review?

While Congress hasn't completely blocked a DC bill since 1991, Congressional leadership has recently stepped up attempts to exert federal power over DC lawmaking, so a risk of Congressional reversal exists. However, should they try, we welcome the opportunity to mount a national-level campaign in defense of the nation's first carbon fee and rebate.