Can Carbon Taxes Fund Climate Investments?

Marc Goldwein
Committee for a Responsible Federal Budget
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Global Temperatures are Rising

Average Daily Maximum Temperature for the District of Columbia

Note: “Lower Emissions” assumes humans stop increasing global emissions of heat-trapping gases by 2040 and then dramatically reduce them through 2100. “Higher Emissions” assumes humans continue increasing emissions of heat-trapping gases through 2100. Lines represent weighted means of several model results.

Sources: The Climate Explorer, Climate.gov.
Note: “Alternative Scenario” assumes extension of individual tax cuts in the TCJA, extension of various tax extenders, maintaining extended funding levels from the Bipartisan Infrastructure Law, and discretionary spending growing at the rate of GDP.
Sources: Committee for a Responsible Federal Budget, Congressional Budget Office.
Debt and Climate Are Both Generational Threats

Rising Debt and Rising Temperatures Both:

➢ Stem from activities with clear benefits today (low taxes, government services, electricity, transportation)

➢ Gradually worsen over time, making it difficult to notice or attribute changes from year to year

➢ Are beginning to cause disruptions today (drought, inflation)

➢ Will impose the largest pain on the future, mainly on those too young to vote or not yet born

(There are also differences – climate change is much more difficult to reverse than rising debt, for example)
And Both Would Reduce Output

Estimated Effect on GDP in 2050

Rising Temperatures

Weather Patterns

Hurricanes

-1.0%

Rising Debt

-2.2%

Sources: Committee for a Responsible Federal Budget, Congressional Budget Office.
US Emissions Have Flattened

Historic and Projected Emissions (millions of metric tons of CO2e)

Sources: Committee for a Responsible Federal Budget, Energy Innovation.
But We Need to Cut them ~40% To Meet Paris Goals

Historic and Projected Emissions (millions of metric tons of CO2e)

- 17% BELOW 2005 LEVELS IN 2020
- 26%-28% BELOW 2005 LEVELS IN 2025
- 50%-52% BELOW 2005 LEVELS IN 2030 (Paris Agreement)

Sources: Committee for a Responsible Federal Budget, Energy Innovation.
We Need Trillions of Deficit Reduction to Fix the Debt

Source: Committee for a Responsible Federal Budget, Congressional Budget Office.
Energy Innovation Helped Us to Model Some Options

ENERGY POLICY SOLUTIONS

What Are the Best Policies to Solve Climate Change?

Designing energy policy correctly is tough work. Well-designed energy policies reduce pollution, cut consumer costs, and minimize dependence on foreign energy supplies. Done wrong, they can do the reverse, and increase pollution, lock in dirty technologies, or waste money.

Which energy policies can lower greenhouse gas emissions in the U.S., and what will it cost? Discover the effects of various energy policies, build your favorite policy package, and share it with friends using the Energy Policy Simulator. Try it using the button below:

Enter Simulator

www.EnergyInnovation.org
### Build Back Better Would Reduce Emissions, Cost $550 billion

**Spending:** $235 billion  
**Tax Breaks:** $335 billion  

<table>
<thead>
<tr>
<th>Clean Energy &amp; Climate Investments</th>
<th>Clean Energy &amp; Electric Tax Credits</th>
<th>Other Climate &amp; Infrastructure-Related Tax Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Air Pollution</strong></td>
<td><strong>Renewable Electricity Production $55</strong></td>
<td><strong>Residential Energy Efficient Property $25</strong></td>
</tr>
<tr>
<td>$36</td>
<td><strong>Energy Credit $52</strong></td>
<td><strong>Advanced Manufacturing Investment $10</strong></td>
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<tr>
<td><strong>Forestry</strong></td>
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<td><strong>Qualify... Enviro. Justice $8</strong></td>
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<td>$26</td>
<td></td>
<td><strong>Advanc... Energy Projects $8</strong></td>
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<tr>
<td><strong>Conservation</strong></td>
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<td><strong>Other $13</strong></td>
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<td>$23</td>
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<tr>
<td><strong>Drinking water</strong></td>
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<td>$9</td>
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<td><strong>NOAA</strong></td>
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<tr>
<td>$8</td>
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<td><strong>USPS Clean Fleets</strong></td>
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<tr>
<td><strong>Rural development</strong></td>
<td></td>
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<td>$25</td>
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<tr>
<td><strong>Passenger Rail</strong></td>
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<td>$9</td>
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<td><strong>EDA</strong></td>
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<tr>
<td>$5</td>
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<tr>
<td><strong>Public Lands</strong></td>
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<tr>
<td><strong>Other</strong></td>
<td></td>
<td></td>
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<tr>
<td>$35</td>
<td></td>
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</tbody>
</table>

**Clean Energy Investment $37**  
**Clean Energy Property Investment**  
**Electric Transmission Property Investment**  
**Clean Hydrogen Production $9**  
**New Plug-In EV Credit for...**  
**Alternati... Fuel Refueling Property $6**  
**Ot... $11**  

**Note:** Chart does not include revenue from methane fee, Superfund fee, or offshore wind leasing.  
**Sources:** Committee for a Responsible Federal Budget, Congressional Budget Office, Joint Committee on Taxation.
But It Would Still Leave Us Far From Paris

Emissions Impact of BBB, Carbon Tax, and Combined Scenarios (millions of metric tons of CO2e)

<table>
<thead>
<tr>
<th>Year</th>
<th>Baseline</th>
<th>Build Back Better (BBB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>5,000</td>
<td>5,000</td>
</tr>
<tr>
<td>2020</td>
<td>4,900</td>
<td>4,900</td>
</tr>
<tr>
<td>2022</td>
<td>4,800</td>
<td>4,800</td>
</tr>
<tr>
<td>2024</td>
<td>4,700</td>
<td>4,700</td>
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<tr>
<td>2026</td>
<td>4,600</td>
<td>4,600</td>
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<tr>
<td>2028</td>
<td>4,500</td>
<td>4,500</td>
</tr>
<tr>
<td>2030</td>
<td>4,400</td>
<td>4,400</td>
</tr>
</tbody>
</table>

Paris Agreement 2030 NDC: 3,200

Sources: Committee for a Responsible Federal Budget, Energy Innovation.
And Would Require More Taxes, Spending Cuts, or Debt

Sources: Committee for a Responsible Federal Budget, Congressional Budget Office.
Instead, We Could Pass a Carbon Tax

A Carbon Tax Could:

- Appropriately price the “externality” of climate change
- Encourage *efficient* market-driven shifts toward cleaner consumption and production
- Allow us to price imports to promote emissions reductions abroad, including in China and India
- Incentivize the development of new technologies
- Raise $1 to $2 trillion over the next decade
But It Would Still Leave Us Far From Paris

Emissions Impact of BBB, Carbon Tax, and Combined Scenarios (millions of metric tons of CO2e)

- Baseline
- $20 Carbon Tax (1% growth)
- $40 Carbon Tax (5% growth)

Paris Agreement 2030 NDC

Sources: Committee for a Responsible Federal Budget, Energy Innovation.
And It Could Raise Prices At a Time of High Inflation

Can a Carbon Tax Fund Climate Investments?
April 7, 2022

Though the Senate will not consider the House-passed Build Back Better Act (BBB), there has been some discussion of reviving the legislation’s climate provisions as part of a new package that would also be designed to promote energy independence, reduce prescription drug costs, raise revenue, and reduce deficits.

The House-passed Build Back Better Act financed spending and tax breaks through a combination of tax increases on corporations and high earners, prescription drug savings, and near-term borrowing (along with arbitrary policy expirations).

In this analysis, we consider the implications of coupling the Build Back Better Act’s climate provisions with a carbon tax or other carbon pricing mechanism. We rely heavily on helpful modeling from Energy Innovation: Policy & Technology LLC for this analysis.¹ Based largely on modeling from Energy Innovation, this analysis finds:

- The Build Back Better Act’s climate provisions would cost roughly $550 billion
A Carbon Tax Could Pay for Climate Investments

Ten-Year Deficit Impact of BBB Climate Provisions, Carbon Tax, and Combined Scenarios (billions)

Note: Positive numbers indicate deficit reduction; negative numbers indicate deficit increase. Non-climate costs and offsets are not included in this analysis.
Sources: Committee for a Responsible Federal Budget, Energy Innovation, Congressional Budget Office.
Together, They’d Reduce Emissions Significantly

Emissions Impact of BBB, Carbon Tax, and Combined Scenarios (millions of metric tons of CO2e)

- Baseline
- Build Back Better (BBB)
- $40 Carbon Tax
- BBB & $20 Carbon Tax
- BBB & $40 Carbon Tax

Paris Agreement 2030 NDC

Sources: Committee for a Responsible Federal Budget, Energy Innovation.
Putting Us in Spitting Distance of Paris

Emissions Impacts of BBB, Carbon Tax, and Combined Scenarios Relative to 2005 levels

- Baseline
- BBB
- BBB & $20 Carbon Tax
- BBB & $40 Carbon Tax
- Paris

Sources: Committee for a Responsible Federal Budget, Energy Innovation.
While Raising Substantial New Revenue

Cost of BBB Climate Provisions and Projected Revenue from Carbon Taxes (billions)

- Clean energy & electric tax credits
- Clean fuel & vehicle tax credits
- Other climate & infrastructure-related tax benefits
- Clean energy & climate resilience

Note: Non-climate costs and offsets are not included in this analysis.
Sources: Committee for a Responsible Federal Budget, Energy Innovation, Congressional Budget Office.
Which Could Be Used for Many Purposes

- Cut the Payroll Tax rate by 1.2 percentage points
- Replace Gas Tax and make HTF PERMANENTLY solvent
- Issue an ANNUAL rebate of $265 per person
- Reduce debt by 3% of GDP in 2031
# A Final Summary Table

## Fiscal and Emissions Impacts of BBB, Carbon Tax, and Combined Scenarios

<table>
<thead>
<tr>
<th>Build Back Better Climate Provisions</th>
<th>Ten-Year Fiscal Impact</th>
<th>Percent Change in 2030 Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Build Back Better + $20/ton carbon tax</td>
<td>$50 billion</td>
<td>-25%</td>
</tr>
<tr>
<td>Build Back Better + $40/ton carbon tax</td>
<td>$900 billion</td>
<td>-30%</td>
</tr>
</tbody>
</table>

Note: Positive numbers indicate deficit reduction; negative numbers indicate deficit increase. Non-climate costs and offsets are not included in this analysis.

Sources: Committee for a Responsible Federal Budget, Energy Innovation, Congressional Budget Office.
Successful legislative advocacy needs citizens' voices.

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✓ Text 'CRFB' to 52886