



Why Conservatives Should Support a Pro-Growth, Revenue-Neutral Carbon Tax to Lower the Social Security Payroll Tax Rate

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SUMMARY

There is growing public and media interest in policies to tax carbon. Whether this growing interest is based on environmental concerns, desires for new revenue sources, or dissatisfaction with inefficient regulation, it is paramount that any policy targeting carbon emissions be designed to improve economic efficiency.

A properly designed carbon tax system would not only reduce carbon emissions, but also promote economic growth while minimizing the burden borne by those disproportionately affected.

While many policy proposals to reduce carbon emissions are based on strict governmental regulation, market solutions prove superior to governmental regulatory schemes. Government involvement in the regulation of market externalities, such as pollution, creates inefficiencies and, from a public choice perspective, creates the incentive for rent-seeking behavior where favored groups lobby politicians for special treatment. Using market forces to “regulate” behavior, such that consumer preferences and competition drive innovation to deliver better products and lower costs, is less biased and more efficient. The choice isn’t between government regulation and no regulation. It’s between government regulation and consumer/market regulation. Nothing is more efficient at driving innovation than a competitive market. And those competitive forces are what make a carbon tax scheme economically superior to government regulation of carbon emissions or a carbon cap-and-trade scheme.

In 2008, then-Republican Congressman Bob Inglis and former President Reagan economic advisor Arthur Laffer wrote in *The New York Times* about the failure of a climate change bill to pass in Congress, stating had Congress “instead proposed a simple carbon tax coupled with an

equal, offsetting reduction in income taxes or payroll taxes, a dynamic new energy security policy could have taken root.² Inglis and Laffer further argued: “It is essential that any taxes on carbon emissions be accompanied by equal, pro-growth tax cuts. A carbon tax that isn’t accompanied by a reduction in other taxes is a nonstarter. Fiscal conservatives would gladly trade a carbon tax for a reduction in payroll or income taxes.”

A carbon tax accompanied by a reduction in other taxes is a sensible policy position. The point of a carbon tax is not to increase overall taxes on the economy, but rather to have the taxation we engage in operate in a more efficient and pro-growth manner, while reducing excess burdens and correcting for negative externalities. Smart tax policy would tax more heavily the things society wants less of (carbon) and tax less, or even not at all, the things society wants more of (labor, savings and investment).

A big cost of operating a business is labor. Labor costs include not just the wage paid to an employee, but also the additional costs of employing someone, such as health insurance and payroll taxes. As the cost of labor increases, either through legislated increases in the minimum wage or higher payroll taxes, employers look to automation to reduce costs. Not only would a reduction in the payroll tax rate lower the cost of labor, thereby making labor and employment more attractive to employers, but the

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²An Emissions Plan Conservatives Could Warm To,” *New York Times*. December 27, 2008. <https://www.nytimes.com/2008/12/28/opinion/28inglis.html>

after-tax wage rate would increase for employees, making work more attractive and economically rewarding. The economic growth from lower taxes and increased employment would be tremendous. Further, because many Americans pay more in payroll taxes than they do in income taxes, a reduction in the payroll tax would be very progressive, offsetting the regressive nature of a carbon tax.

But, as the Social Security programs currently face financial shortfalls, the combined Social Security Trust Funds are projected to be depleted by 2035.³ Further, the projected 75-year actuarial shortfall is 2.78 percent of taxable payroll, or about 1 percent of US GDP. Unfortunately, many proposals to shore up the Social Security system focus solely on raising payroll taxes, which would have a dampening effect on employment and economic growth.

This paper lays out the case for adopting a revenue-neutral carbon tax in which resulting revenue could be used to:

- *Reduce the payroll tax rate*
- *Finance innovative private savings accounts on top of Social Security*
- *Finance other targeted pro-growth Social Security reforms; or*
- *Shore up the Social Security system by devoting the revenue to the Trust Funds.*

For example, a \$40 carbon tax per metric ton would raise enough revenue in the first year to finance a 2-percentage point reduction in the payroll tax rate, from 12.4 percent to 10.4 percent. Alternatively, the revenue from a \$40 carbon

tax per metric ton could finance add-on Social Security private savings accounts, such as Supplemental Transition Accounts for Retirement, or STARTs,⁴ described later in this paper. A carbon tax as low as \$10 per metric ton would likely raise more than enough revenue to eliminate the Social Security payroll tax on those ages 62 and over. While a payroll tax reduction or targeted Social Security reforms would be more pro-growth, using the revenue from a carbon tax to avoid a potential future increase in the payroll tax once the Social Security Trust Funds are depleted is a second-best alternative.

IN SUPPORT OF A CARBON TAX

It is important to note that the “price” of something does not necessarily equal its “cost.” For example, the price paid for a gallon of gasoline to drive a car does not include all of the costs associated with driving, such as pollution, traffic congestion, etc. These costs are external to the price paid for a gallon of gas. In economic language these costs are called “externalities.” When trying to design policies that reduce market externalities, it is important for the policy solutions to internalize these costs within the price of the good or service leading to the externality so that eventually, the price of the good equals its cost. A properly designed carbon tax would do just that.

A revenue-neutral carbon tax is a promising solution to the growing demand for climate change action. The tax increases the relative price of carbon emissions, reducing the demand for carbon-emitting goods. Operating through this demand mechanism, carbon emissions are curbed while incentives to innovate remain. Though some will bear a heavier burden of the distortive effects, a revenue-neutral carbon tax would use the revenue to reduce a different type of tax and limit any negative economic effects. This

³ *The 2019 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds.* Social Security Board of Trustees. 2019. <https://www.ssa.gov/OACT/TR/2019/index.html>.

⁴ *Supplemental Transition Accounts for Retirement: A Proposal to Increase Retirement Income Security and Reform Social Security.* Koenig, Fichtner and Gale. August 2018.

paper specifically explores how revenue from a carbon tax can be used to reduce the payroll tax rate, finance innovative private savings accounts, finance targeted pro-growth Social Security reforms, or shore up the Social Security system by devoting the revenue to the Trust Funds. However, the political atmosphere around climate change action is complicated and nuanced. Historical opposition from conservatives is changing rapidly, prompting many conservatives to develop policies to address climate change while holding true to the conservative values of free markets, limited government and fiscal responsibility. Whenever developing and promoting policies of any kind, conservative policymakers must carefully consider the political relevance, feasibility, and public opinion surrounding the issues being addressed.

Keeping these considerations in mind, the political relevance of climate change is anything but inconsequential. Both sides of the aisle, conservatives and liberals alike, have become increasingly supportive of governmental action to reduce carbon emissions, specifically in the name of combating climate change.

In May of 2018, the Yale Program on Climate Change Communication published an extensive study revealing significant support for climate change policy from both sides of the political spectrum. The study found that 91 percent of Democrats, 80 percent of Independents and 69 percent of Republicans supported “regulating carbon dioxide as a pollutant.” Furthermore, 84 percent of Democrats, 68 percent of Independents and 56 percent of Republicans supported “requiring fossil fuel companies to pay a carbon tax and using the money to reduce other taxes (such as income tax) by an equal amount.”⁵

Political attitudes toward climate change are shifting rapidly. A significant proportion of Americans desire action to counteract climate change, making it no longer only a

liberal issue, but a conservative one as well. Conservative lawmakers must keep this in mind from two strategic perspectives. First, conservative constituents are beginning to care about climate change, demanding efficient, effective action while minimizing any economic harm. Though it is not currently an overwhelming majority, conservative support for climate change action is nevertheless growing quickly. Climate change is becoming a higher priority for conservative voters, creating a growing demand for a pro-growth solution. Conservative lawmakers must anticipate changing public opinion among their constituents and strategically prepare policies that address climate change while promoting economic growth. Being proactive is the only solution.

Second, climate change remains an incredibly important issue for democratic and independent voters. According to the Yale study, climate change is now the fourth-highest priority for liberals in upcoming elections. This is important because Democrats have historically implemented costly and less efficient regulatory policies, harming the economy. Under President Obama, command-and-control regulations were implemented to reduce carbon emissions and combat climate change. Research continually shows command-and-control regulations are less efficient and less effective than other alternatives, such as a revenue-neutral carbon tax. If conservative policymakers want to minimize volatility in the change of the regulatory landscape during shifts in political control, Republicans must proactively create and advocate for policies to reduce carbon emissions while minimizing any harm to the economy. Even oil companies, such as Exxon Mobil,⁶ are anticipating the shift in public opinion. These companies are beginning to actively endorse policies like a revenue-neutral carbon tax to establish climate solutions that most efficiently reduce carbon emissions while minimizing the impact on the economy.

⁵ *Politics & Global Warming,” Yale Program on Climate Change Communication & George Mason University Center for Climate Change Communication. March 2018.*

⁶ *Exxon Mobil Lends Its Support to a Carbon Tax Proposal,” New York Times. June 20, 2017. <https://www.nytimes.com/2017/06/20/science/exxon-carbon-tax.html>*

The question remains

WHY IS CLIMATE CHANGE ACTION BECOMING MORE POPULAR IN THE FIRST PLACE, EVEN AMONG CONSERVATIVES?

This is due to the increasing acknowledgment of negative externalities caused by excessive carbon emissions. The uniqueness of these negative externalities stems from the market's failure to reduce carbon emissions in a timely manner. Free-rider incentives are at the core of this market failure. To effectively reduce carbon emissions while limiting the effect borne by any singular individual, there needs to be collective action from society as a whole. Yet people fail to reduce their own consumption of carbon without an external motivator. This "free-rider problem" occurs because there is an incentive for individuals to let everyone else reduce their carbon emissions while keeping their own at the same levels. When enough individuals free ride, any significant action from the collective fails. As individuals realize their efforts are in vain, those who weren't free riding face increasing incentives to return to their old levels of carbon consumption. Eventually, the entire effort to reduce carbon emissions collapses and effective climate change action remains elusive.

However, a revenue-neutral carbon tax offers a unique solution to this complex dynamic. By raising the relative price of carbon, overall demand for carbon will decrease. Because the cost of the tax will be spread throughout the economy, there is little opportunity to free ride.

While the reduction of carbon emissions to combat climate change is an important reason for implementing a revenue-neutral carbon tax, an equally important reason is that a carefully designed policy could spur economic growth.

All taxes, by definition, are distortive, but some are more distortive than others. Among the most distortive taxes are corporate and income taxes. If the revenue from a carbon tax is used to lower the levels of more distortive taxes, then there is potential for the overall economy to benefit. Being administratively easier to implement than other taxes, a properly designed revenue-neutral carbon tax has the potential not only to address climate change, but to spur economic growth and reduce the expansion of the federal government as well. When factoring in the costs of other types of regulation, such as command-and-control statutes, the economic benefit increases exponentially.

If designed and implemented appropriately, a revenue-neutral carbon tax can efficiently reduce carbon emissions while limiting government expansion and administrative cost. As long as the carbon tax is truly revenue-neutral, where the revenues of the carbon tax are utilized to pay down another tax or distributed through a rebate, those who bear the greatest cost of the carbon tax can be compensated and the distortive effects of the tax minimized. If the revenues from the carbon tax replace a more distortive tax, then a revenue-neutral carbon tax not only addresses climate change; it can promote economic prosperity as well. Even so, there many nuances that complicate an appropriate cost-benefit analysis of this policy. The literature analyzing a revenue-neutral carbon tax is vast, covering why a carbon tax is the most efficient policy, who bears the greatest burden from this policy, and what limitations exist in the current models that analyze the policy's benefits.

"Politics & Global Warming," Yale Program on Climate Change Communication & George Mason University Center for Climate Change Communication. March 2018.

"Exxon Mobil Lends Its Support to a Carbon Tax Proposal," New York Times. June 20, 2017. <https://www.nytimes.com/2017/06/20/science/exxon-carbon-tax.html>

A REVIEW OF THE LITERATURE

Prior to the Trump Administration, the US underwent one of its most robust regulatory expansions in carbon emission controls.⁷ By one study's estimate, regulatory efforts to curb carbon emissions reduce US GDP annually by over 1 percent in the long run, or \$1,770 per household annually.⁸ In response to this economic reduction, conservatives united in opposition to the regulatory harm. However, a consensus about what to do about these regulations remains elusive.⁹ Under the Trump Administration, there has been a significant reduction in environmental regulations, championing a conservative philosophy of strict deregulation.¹⁰ However, with a growing public desire to address climate change and the certainty of the political cycle's seesawing nature, some conservatives argue that these regulations will fully reemerge.¹¹ Unless a pro-growth climate policy is implemented, such as a revenue-neutral carbon tax, many conservatives argue that inefficient command-and-control regulatory regimes will be favored over efficient, pro-growth alternatives to address climate change.¹²

A vibrant body of research literature argues that the competitive advantage of a Pigouvian-style revenue-neutral

carbon tax stems from its innovation incentives.¹³ Strict regulatory approaches reduce incentives for innovation beyond the adoption of mandated technology or emission limits.¹⁴ A change in relative prices due to a carbon tax, spread throughout the economy, incentivizes producers and consumers to find the best individual strategies to minimize their emission costs. By definition, these free market incentives to minimize producer and consumer costs will mitigate deadweight loss. Theoretically, this utility maximization can be achieved through regulatory statutes but, empirically, tailoring policies to each firm's ability to maximize abatement efficiency is cumbersome and costly, making carbon pricing more efficient and effective.¹⁵ In addition, internalizing the external costs of carbon through a tax will raise the competitiveness of clean energy, reducing the need for a number of expensive clean energy subsidies and tax credits.¹⁶ Therefore, not only would a carbon tax generate savings through reduced expenditures on subsidies, but it would also create an opportunity to simplify the US tax code and reduce the cost of servicing these taxes.¹⁷

⁷ *Climate Change Laws in the USA*, "Climate Home News. December 2, 2013. Updated June 2018. <https://www.climatechangenews.com/2013/02/12/in-focus-usa-climate-laws/>.

⁸ *Carbon Regulations vs. a Carbon Tax: A Comparison of the Macroeconomic Impacts*, "EY. October 2018.

⁹ *A Carbon Tax That Constrains Government*, "Michael Marlow. May 2018.

¹⁰ See, for example: "Fall 2018 Unified Agenda of Regulatory and Deregulatory Actions," Office of Management and Budget, Office of Information and Regulatory Affairs. November 16, 2018; and "Carbon Tax Policy: A Conservative Dialogue on Pro-Growth Opportunities," Alex Brill (Ed). 2017.

¹¹ See, for example: "A Carbon Tax That Constrains Government," Michael Marlow. May 2018; "Carbon Tax Policy: A Conservative Dialogue on Pro-Growth Opportunities," Alex Brill (Ed). 2017; and "Unlocking the Climate Puzzle," Ted Halstead. May 2016.

¹² See, for example: "A Carbon Tax That Constrains Government," Michael Marlow. May 2018; and "Carbon Tax Policy: A Conservative Dialogue on Pro-Growth Opportunities," Alex Brill (Ed). 2017.

¹³ See, for example: "A Carbon Tax That Constrains Government," Michael Marlow. May 2018; "Carbon Tax Policy: A Conservative Dialogue on Pro-Growth Opportunities," Alex Brill (Ed). 2017; and "Comparing Effectiveness of Climate Regulations and a Carbon Tax," Rossetti, Bosch and Goldbeck. July 2, 2018.

¹⁴ *A Carbon Tax That Constrains Government*, "Michael Marlow. May 2018.

¹⁵ See, for example: "Carbon Tax Policy: A Conservative Dialogue on Pro-Growth Opportunities," Alex Brill (Ed). 2017; "Markets versus Regulation: The Efficiency and Distributional Impacts of U.S. Climate Policy Proposals," Rausch and Karplus. 2014; and "Imperfect Markets versus Imperfect Regulation in U.S. Electricity Generation," Steve Cicala. May 2017.

¹⁶ *US Carbon Tax Design: Options and Implications*, "Bordoff and Larsen. January 2018.

¹⁷ See, for example: "A Carbon Tax That Constrains Government," Michael Marlow. May 2018; "Carbon Tax Policy: A Conservative Dialogue on Pro-Growth Opportunities," Alex Brill (Ed). 2017; and "Putting a Price on Carbon: A Handbook for U.S. Policymakers," Kennedy, Obeiter, and Kaufman. April 2015.

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Additional cost advantages stem from the relative administrative ease of a carbon tax. A study found that by strategically constructing an upstream collection scheme, there would be fewer than 3000 collection points, allowing for administrative simplicity and greater transparency. The costs would then be passed down throughout the entire economy to a large base.¹⁸ Studies comparing the costs between a gasoline tax, similar to how a carbon tax effectively works, and CAFE efficiency standards, a typical command-and-control regulation, found CAFE standards to be 2.4 to 7 times costlier than the simple tax.¹⁹ These costs of regulation drive the conservative movement for a politically sustainable climate policy solution that promotes economic prosperity while addressing the concerns and costs related to carbon emission.

Carbon pricing alternatives, such as cap-and-trade schemes, have been proposed with the theoretical equivalence to a carbon tax, and advocated due to the ability to directly control the quantity of carbon emissions. Under a cap-and-trade model, permits are auctioned by the government to firms, allowing carbon emissions up to each firm's permit limit. These permits are then allowed to be traded within the industry, theoretically being allocated efficiently. However, a review of empirical studies describes many issues that arise during implementation. These schemes have been subject to massive price volatility, manipulation, and the arbitrary distribution of permits based on government favorability. A carbon tax addresses these issues by being adjustable and blanketed, allowing

for price stability, quantity control and indiscriminate implementation.²⁰

Though a carbon tax has many advantages over strict regulation and cap-and-trade schemes, a carbon tax alone still restricts and distorts the economy. With strategic use of the tax revenue through pro-growth and revenue-neutral avenues, these distortions can be offset and the tax's negative effects mitigated. Throughout the carbon tax literature, using revenues to offset these distortions has been proposed in such forms as carbon dividends, deficit reductions, reductions in corporate taxes, reductions in individual taxes and infrastructure investments.²¹ Estimates have found that the repeal of regulation, coupled with a carbon tax where the revenue is used in an offsetting manner, expands the US GDP in the range of 0.7% to 3.2% annually in the long run, depending on the offsetting expenditure.²² Even so, there have been other studies skeptical of the offsetting effects of a carbon tax, claiming the tax would be more distortive and harmful than the countering effects of revenue-neutral offsets.²³

Even with the elimination of any uncertainty due to the limitations in economic models and their forecasts, distributional concerns remain prevalent. The Congressional Budget Office found investors and workers in fossil fuel industries to be the most dramatically affected due to their loss in income caused by a reduction in demand for their products.²⁴

¹⁸ See, for example: "A Carbon Tax That Constrains Government," Michael Marlow, May 2018; "Carbon Tax Policy: A Conservative Dialogue on Pro-Growth Opportunities," Alex Brill (Ed), 2017; "Comparing Effectiveness of Climate Regulations and a Carbon Tax," Rossetti, Bosch and Goldbeck, July 2, 2018, "The Design of a Carbon Tax," Metcalf and Weisbach, 2009; and "Effects of a Carbon Tax on the Economy and the Environment," Congressional Budget Office, May 2013.

¹⁹ See, for example: "A Carbon Tax Would Be Less Regressive and Energy Efficiency Standards," Arik Levinson, July 5, 2018; "Clearing the Air: The Costs and Consequences of Higher CAFE Standards and Increased Gasoline Taxes," Austin and Dinan, August 2005; and "Evaluating US Fuel Economy Standards in a Model with Producer and Household Heterogeneity," Mark Jacobsen, May 2013.

²⁰ "Climate Change: Caps vs. Taxes," Green, Hayward and Hassett, June 2007.

²¹ "Carbon Regulations vs. a Carbon Tax: A Comparison of the Macroeconomic Impacts," EY, October 2018; and "The Energy, Economic, and Emissions Impacts of a Federal US Carbon Tax," Kaufman and Gordon, July 2018.

²² "Carbon Regulations vs. a Carbon Tax: A Comparison of the Macroeconomic Impacts," EY, October 2018.

²³ "The Case Against a U.S. Carbon Tax," Murphy, Michaels, and Knappenberger, October 17, 2016.

²⁴ "Effects of a Carbon Tax on the Economy and the Environment," Congressional Budget Office, May 2013.

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This has led many Republicans to believe their constituents would be disproportionately affected. Brill and Ganz (2018) analyzed whether or not Republican-leaning counties would be disproportionately affected and found little evidence for this, especially when accounting for the social costs of carbon.²⁵ Still, various studies (Diamond 2018, Hassett 2009, Grainger 2010, Williams 2015, Rausch 2011, Cronin 2017, and Rosenberg 2018) have found a carbon tax to be regressive initially, disproportionately affecting the poor. However, to varying degrees, these studies found that the regressive nature of a carbon tax can be completely mitigated and turned into a progressive or neutral outcome, depending on what revenue recycling/offsetting methods were used.²⁶ Yet again, model limitations still create uncertainty about the overall impact of a carbon tax on society and the distributional results.

A major source of modeling limitations stems from conflicting measures of the social cost of carbon. The Interagency Working Group on Social Cost of Greenhouse Gases describes the social cost of carbon as “the monetized damages associated with an incremental increase in carbon emissions in a given year.” Many agencies, organizations and academic institutions have attempted to calculate the social cost of carbon in order to “accurately” measure the cost and benefits of different climate change policies. Nevertheless, there is great variability in estimates of the social cost of carbon due to differing assumptions and

discounting methods. Under the Interagency Working Group’s estimates in 2007 dollars, the social cost of carbon in 2020 will be \$42 dollars per metric ton of CO₂ using a 3% discount rate. Using other discount rates and assumptions, average estimates range from \$12 to \$123 per metric ton. The entire distribution of estimates ranges between \$0 and \$180 per metric ton.²⁷

Estimating the social cost of carbon involves many uncertainties and assumptions. Revenue estimates, though varying, have much less uncertainty than the social cost of carbon estimates. Much of the variety in revenue estimates stems from differing assumptions, such as price sensitivities and elasticities. The Congressional Budget Office estimated that a \$25 carbon tax per metric ton starting in 2019 with an annual real 2% tax increase would have a 5-year revenue total of \$494.7 billion and a 10-year revenue total of \$1.099 trillion.²⁸ The Department of Treasury found that, under their main scenario, a \$49 carbon tax per metric ton starting in 2019 with an annual real 2% tax increase would have a 5-year revenue total of \$1.050 trillion and a 10-year revenue total of \$2.219 trillion. Under a scenario with rapid technological progress, the Treasury found that the same tax would gross a 5-year revenue total of \$975 billion and a 10-year revenue total of \$1.736 trillion.²⁹

²⁵ “The Partisan Divide Over the Carbon Tax Is All Smoke,” *Real Clear Policy*. Brill and Ganz. January 29, 2018. https://www.realclearpolicy.com/articles/2018/01/29/the_partisan_divide_over_the_carbon_tax_is_all_smoke.html.

²⁶ See, for example: “The Effects of Carbon Tax Policies on the US Economy and the Welfare of Households,” Diamond and Zodrow. July 2018; “The Incidence of a U.S. Carbon Tax: A Lifetime and Regional Analysis,” Hassett, Mathur, and Metcalf. 2009; “Who Pays a Price on Carbon?” Grainger and Kolstad. March 2010; “The Initial Incidence of a Carbon Tax Across Income Groups,” Williams, Gordon, Burtraw, Carbone, and Morgenstern. March 2015; “Carbon Taxes, Deficits, and Energy Policy Interactions,” Rausch, Metcalf, and Reilly. March 2015; “Vertical and Horizontal Redistributions from a Carbon Tax and Rebate,” Cronin, Fullerton, and Sexton. March 2017; and “Distributional Effects of Taxing Carbon,” Rosenberg, Toder, and Lu. July 2018.

²⁷ “Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866,” *Interagency Working Group on Social Cost of Greenhouse Gases, United States Government*. April 2016.

²⁸ “Impose a Tax on Emissions of Greenhouse Gases,” *Congressional Budget Office*. December 13, 2018. <https://www.cbo.gov/budget-options/2018/54821>.

²⁹ “Methodology for Analyzing a Carbon Tax,” Horowitz, Cronin, Hawkins, Konda, & Yuskavage. *Department of Treasury Office of Tax Analysis*. January 2017.

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Private organizations, such as Resources for the Future, have created the E3 Carbon Tax Calculator, allowing for revenue estimates based on customizable increases in a carbon tax and real rates at which these rates increase.³⁰ Under this model, 10-year revenues range from \$258.6 billion using a stationary \$5 carbon tax to \$2.356 trillion using a \$50 carbon tax with a real growth rate of 5 percent.

To put this revenue in perspective, workers paid approximately \$885 billion in payroll taxes to the Social Security Trust Funds in 2018.³¹ A \$25 carbon tax per metric ton would raise approximately \$120 billion in the first year. A carbon tax of \$40 per metric ton would approximately \$167 billion in the first year, or enough to finance a 2-percentage point reduction in the Social Security payroll tax rate (from the current 12.4 percent to 10.4 percent).³² A carbon tax of \$50 per metric ton would raise approximately \$200 billion in the first year allowing for a revenue-neutral payroll tax rate reduction of 2-percentage points with some additional revenue remaining to add to the Trust Funds.³³ Similarly, the US Treasury Department estimated that a carbon tax set at \$49 per metric ton in 2019 and increasing to \$70 in 2028 would raise enough revenue in 2019 to offset 20 percent of the Social Security payroll tax, or roughly a 2.5-percentage point reduction in the Social Security payroll tax rate.³⁴

There are many elements to designing a carbon tax, a complete discussion of which is outside the scope of this paper.³⁵ Needless to say, a few factors need to be taken into consideration.

The first is how broad the tax base will be. The broader the base, the more efficient the tax will be, as consumers and producers will respond to the relative price changes due to the tax and be unable to avoid the tax simply by choosing a non-taxable carbon-emitting source. In this context, it is necessary to consider which fuels and gases will be taxed, which sectors of the economy will be taxed, and whether there will be any exemptions, credits or rebates. For example, it might be necessary to tax imports, but exempt exports from the carbon tax, to create a level international playing field.

The second consideration is what tax rate to apply.

Depending on whether the main policy goal of the tax is to raise revenue or change behavior, the appropriate rate needs to be discussed and determined. Rates can also be set to increase over time, presumably rising as the amount of carbon subject to the tax declines due to changes in producer and consumer behavior in response to the tax. A carbon tax will have an effect on behavior and, as relative prices change, producers and consumers will shift to other, greener forms of energy. Presumably, this should result in a decreasing tax base and declining revenues over time if the carbon tax rate is not increased. As such, most carbon tax proposals call for increasing the tax rate over time.

³⁰ "Introducing the E3 Carbon Tax Calculator: Estimating Future CO₂ Emissions and Revenues," Marc Hafstead. September 25, 2017. <https://www.resourcesmag.org/common-resources/introducing-the-e3-carbon-tax-calculator-estimating-future-co2-emissions-and-revenues/>.

³¹ "The 2019 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds." Social Security Board of Trustees. 2019. Table V1.A3.

³² The statutory payroll tax allocation for Social Security is 12.4%, split 10.6% for OASI and 1.8% for DI, on covered wages up to \$132,900 for 2019. Including Medicare payroll taxes, the combined statutory rate is 15.3% (2.9% HI). There is no cap on covered wages for the Medicare payroll tax. The payroll tax is split evenly between the employer and employee, though the burden of the tax falls on employees in the form of lower wages. Technically, there are two separate trust funds, one for the Old-Age and Survivors Insurance (OASI) program and one for the Disability Insurance (DI) program. The financial operations of the two trust funds are often combined when discussed in the media and among policymakers.

³³ This is consistent with findings by the US Treasury Department. See: "Methodology for Analyzing a Carbon Tax," Horowitz, Cronin, Hawkins, Konda, & Yuskavage. Department of Treasury Office of Tax Analysis. January 2017.

³⁴ "Methodology for Analyzing a Carbon Tax," Horowitz, Cronin, Hawkins, Konda, & Yuskavage. Department of Treasury Office of Tax Analysis. January 2017.

³⁵ For an in-depth discussion of these issues, see: "US Carbon Tax Design: Options and Implications," Bordoff and Larsen. January 2018.

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Finally, policymakers need to determine where the revenue from a carbon tax will go. If the revenue is used to expand the size of government, rather than to offset harmful inefficiencies elsewhere in the economy, a carbon tax could end up dampening economic growth, reducing the demand for labor, and worsening income inequality. Instead, the revenue from a carbon tax could be used to offset a portion of the Social Security payroll tax, providing a pro-growth measure that reduces the cost of labor to employers and increases the returns for employees. Further, a payroll tax reduction would be progressive and benefit many low- and middle-income workers.

The third issue to be considered is at what point in the economic chain of activity should the tax be levied.

A carbon tax can be applied “upstream” based on carbon content at the point of production – for example, taxing coal mines. Alternatively, a “downstream” tax would apply at the point of consumption – for example, a gasoline tax. The salience of a downstream tax would be closer to the end-consumer and have more of a direct effect on behavior. An upstream tax would tax fewer entities; however, the incidence of the tax would likely be passed along to consumers in the form of higher prices. According to some estimates, a carbon tax of \$40 per metric ton would increase gasoline prices by 36 cents per gallon.³⁷

IN SUPPORT OF USING REVENUE FROM A CARBON TAX TO REDUCE THE SOCIAL SECURITY PAYROLL TAX RATE

Social Security is the nation’s largest federal program by outlays. In 2018, the total cost of the program was \$1 trillion. At the end of 2018, the Social Security program was providing benefit payments to about 63 million people: 47 million retired workers and dependents of retired workers, 6 million survivors of deceased workers, and 10 million disabled workers and dependents of disabled workers. During the year, an estimated 176 million people had earnings covered by Social Security and paid payroll taxes on those earnings.³⁸ If no changes are made to the program’s finances or benefits, then beginning in 2020, costs are projected to exceed total income and the Trust Fund reserves will decline until their depletion in 2035.

The program currently faces a funding gap of \$13.9 trillion in present value terms through 2093. Over what is termed the “infinite horizon,” the gap is \$43.2 trillion. The actuarial deficit facing Social Security is 2.78 percent of taxable payroll (2.61 percentage points for OASI and 0.17 for DI). This means that in order to close the program’s unfunded gap between scheduled benefits and projected revenues, if the focus is on benefit reductions, an immediate reduction in benefits of 17 percent across the board would have to be applied today, or about 20 percent if the benefit cut was only applied to new beneficiaries in 2019 and later. If the focus is on the revenue side, a 2.70-percentage-point increase would be required immediately, raising the Social Security payroll tax rate from 12.4 percent to 15.1 percent (a 22% tax increase).³⁹

³⁶ <https://www.taxpolicycenter.org/briefing-book/what-carbon-tax>.

³⁷ “The 2019 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds.” Social Security Board of Trustees. 2019.

³⁸ “The 2019 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds.” Social Security Board of Trustees. 2019.

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The cost of delaying action is enormous. If substantial actions are deferred for several years, the changes necessary to maintain Social Security solvency would be concentrated over fewer years and fewer generations. Further, the available policy options are reduced the longer action is delayed, as much larger changes would be necessary if action is deferred until the combined Trust Fund reserves become depleted in 2035. For example, maintaining 75-year solvency with policies that begin in 2035 would require either an increase in revenues by an amount equivalent to a 3.65-percentage-point payroll tax rate increase to 16.05 percent starting in 2035, a reduction in scheduled benefits by an amount equivalent to a 23 percent reduction in all benefits starting in 2035, or some combination of these approaches.⁴⁰

Labor force participation bears a straightforward relationship to economic growth: aggregate growth is equal to the growth in productivity per worker times the growth in the number of workers. Economic growth is therefore highly dependent upon business decisions to hire and individual decisions to participate in the labor force and contribute to the growth of the larger economy.

The payroll tax is a tax on work, and most analyses of Social Security have concluded that its current design offers substantially negative incentives for work, especially for younger seniors and for secondary household earners. Research by Reznik, Weaver, and Biggs (2009) found that Social Security's return on payroll tax contributions by those aged 62 to 65 is a negative 49.5 percent,⁴¹ meaning that the program literally pays back just pennies in additional benefits for each additional dollar contributed. Butrica et al.

(2004) found that the broader array of federal laws strongly inhibits continued work by seniors, with disincentives growing stronger as they age: "The implicit tax rate on work increases rapidly with age, rising for our representative worker from 14 percent at age 55 to 50 percent at age 70."⁴²

Further, as James Capretta notes: "Cutting payroll taxes would also boost economic growth. The payroll tax is, after all, a tax on work. Cutting it would encourage more people to join the labor force; it would also motivate those who are already working to increase the number of hours they work. This would be the 'supply-side' effect of a payroll-tax cut. Cut the tax, and the supply of labor will increase."⁴³

Broadening the point that cutting the payroll tax would lead to an increase in the supply of labor, reducing the burden of the payroll tax would also help increase employment in jobs that are labor-intensive, but where payroll taxes make hiring too expensive. For example, a reduction in the payroll tax rate would lower the cost of employing day care and senior care employees. A lower payroll tax would also increase the returns to self-employed workers and those working in the gig economy, such as Uber and Lyft.

A number of Social Security reforms could be implemented to better encourage and support work. Some of these changes would produce net direct savings for the Social Security program, whereas others would benefit individual participants at some expense to program finances. The often-discussed proposals to raise Social Security eligibility ages would likely have a positive effect on worker output and economic growth.

³⁹ "The 2019 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds." Social Security Board of Trustees. 2019.

⁴⁰ "The 2019 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds." Social Security Board of Trustees. 2019.

⁴¹ "Social Security and Marginal Returns to Work Near Retirement," Gayle Reznik, David Weaver, and Andrew Biggs. Social Security Administration. April 2009.

⁴² "Does Work Pay at Older Ages? Butrica et al. December 2004.

⁴³ "Cut the Payroll Tax," James Capretta. October 16, 2017. <http://www.aei.org/publication/cut-the-payroll-tax/>.

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With age 62 now being the most popular age of benefit claim, raising the early eligibility age (EEA) would necessarily delay many claims and would likely be correlated with continued work.⁴⁵ Biggs (2009) has estimated that raising the EEA to 65 would increase long-run GDP by 3–4 percent.⁴⁶

But one reform that would benefit all workers is a reduction in the payroll tax rate. Again, an estimated 176 million people had earnings covered by Social Security and paid payroll taxes on those earnings. However, with the recent focus on reducing individual and corporate income tax rates, the payroll tax has taken a back seat among conservatives. But for most low- and middle-income workers, the payroll tax is greater than their federal income tax liability.⁴⁷ Conservatives tend to oppose raising the minimum wage and other mandates on business that raise the cost of labor and limit work opportunities by reducing the demand for labor. Conservatives should view the payroll tax in the same manner as they view increases in the minimum wage, because the payroll tax raises the cost of labor. Using the revenue from a carbon tax to provide a reduction in the payroll tax rate would not only be pro-growth, pro-work and pro-family; it would also be a progressive tax cut for millions of Americans. As Capretta also notes, “A cut in the payroll-tax rate would be good for workers. A two-percentage-point reduction in total tax would increase the after-tax income of a household with \$50,000 in earned income by \$1,000 annually.”⁴⁸

Alternatively, instead of funding a 2-percentage-point reduction in the payroll tax, the funds could be credited to the Social Security Trust Funds. Although not the preferred policy option, crediting the trust funds with the financial equivalent of a 2-percentage-point increase in the Social Security payroll tax would close about 75 percent of the 75-year actuarial deficit, and would extend the solvency of the Trust Funds out to 2058.^{49,50} Though crediting any carbon tax revenue to the Trust Funds would not be revenue-neutral or pro-growth, it could be used to forestall a future Social Security payroll tax increase, which would definitely be harmful to economic growth, increase the cost of labor to businesses, and reduce the return from work for individuals.

Some proposals have suggested using the revenue from a carbon tax to provide an annual rebate check as a form of lump-sum payment similar to the Alaska Permanent Fund.⁵¹ While a rebate check would also provide a progressive offset to the regressive burden of a carbon tax, it would create an entirely new form of government entitlement. Further, rebate checks do not lower other existing taxes that have harmful effects on the economy, such as payroll taxes, individual income taxes or corporate income taxes. Additionally, a rebate would not lower the cost of labor to employers or raise the after-tax return from working. Hence, a reduction in the payroll tax rate is likely to be the most pro-growth and pro-work use of any revenue from a carbon tax.

⁴⁴ See, for example: “Social Security Reform and Economic Growth,” Charles Blahous and Jason Fichtner. Chapter 15 in *The 4% Solution: Unleashing the Economic Growth America Needs*, B. Miniter (Ed.), Crown Business Publisher, Random House, Inc., 2012.

⁴⁵ “Raising the Retirement Age for Social Security,” American Academy of Actuaries. October 2010; “The Case for Raising Social Security’s Early Retirement Age,” Andrew Biggs. October 27, 2010; and “Raise the Retirement Age, but Protect Those Who Can’t Work,” Richard Johnson. February 28, 2011.

⁴⁶ “The Case for Raising Social Security’s Early Retirement Age,” Andrew Biggs. October 27, 2010.

⁴⁷ “Overview of the Federal Tax System As In Effect for 2019,” Joint Committee on Taxation, JCX-9-19. March 2019.

⁴⁸ “Cut the Payroll Tax,” James Capretta. October 16, 2017. <http://www.aei.org/publication/cut-the-payroll-tax/>.

⁴⁹ Estimate based on the Committee for a Responsible Federal Budget’s online interactive calculator, which allows users to estimate the impact of various reform proposals. <http://www.crfb.org/socialsecurityreformer/>. Note that the Congressional Budget Office also offers a limited online calculator, available at: <https://www.cbo.gov/publication/54868>.

⁵⁰ The rate at which a carbon tax is applied could also be set to close the Social Security 75-year actuarial balance, which would have to be set much higher than \$50 per metric ton in order to raise enough initial revenue to provide the financial equivalent of a 2.78-percentage-point payroll tax increase, or 1 percent of US GDP. The combined Social Security Trust Funds are projected to be depleted by 2035. Further, the projected 75-year actuarial shortfall is 2.78 percent of taxable payroll, or about 1 percent of US GDP.

⁵¹ <https://apfc.org/>

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From a distributional standpoint, a payroll tax cut is also preferable. Rausch and Reilly (2012) compare the distributional effects of a payroll tax cut to other options and find the payroll tax approach has the most evenly distributed benefits across households as a share of income.⁵²

Though not a lump-sum rebate check based on pro-rated share of carbon tax revenues collected as described above, another mechanism for providing payroll tax relief from revenues generated from a carbon tax is to provide a rebate for a given amount or percentage of payroll taxes paid.

Though more complicated than simply reducing the payroll tax rate, a payroll tax rebate option would maintain the program's contributory financing structure, in which payroll taxes finance benefits, maintaining the link between taxes paid and benefits received. This type of structure is similar in some ways to the Earned Income Tax Credit, which is designed to promote work and offset the effective burden of federal income and payroll taxes⁵³ without lowering tax rates directly or reducing worker and employer payroll tax contributions credited to the Social Security Trust Funds.

Social Security benefits are often described as an "earned benefit." The Social Security benefit formula is progressive, with benefits based on covered earnings and payroll taxes paid on those earnings.⁵⁴ As covered earnings rise, benefits increase as well. Even though the benefit amount increases with earnings, the system is also progressive in that benefits

replace a higher percentage of earnings for lower-income workers than for higher-income workers.⁵⁵ The financing of the Social Security program is designed so that payroll tax contributions generally cover benefits, though currently, the amount of payroll tax revenue raised is not enough to cover the amount of benefits paid.⁵⁶

Reducing or eliminating the contributory financing structure, by allowing the program to be financed in part through a carbon tax, might then open up the door to financing Social Security through other means, such as general revenue transfers. It might also reduce public support for the program if benefits were, even in part, no longer considered "earned."⁵⁷ Hence, instead of a direct reduction in the payroll tax rate of, for example, 2 percent, workers could receive a specific refundable income tax credit equal to 2 percent of their Social Security taxable earnings. A payroll tax rebate maintains the contribution-benefit link that currently exists with the Social Security program. This option would still avoid a net tax increase, lower the effective cost of employment, retain the incentives to limit carbon emissions and maintain the desired distributional effects of using a carbon tax to offset the negative externalities associated with carbon emissions. Additionally, a payroll tax rebate could also be structured to phase out for higher-income earners so that the benefits are more targeted and concentrated toward lower-income workers.

⁵² Sebastian Rausch and John Reilly, "Carbon Tax Revenue and the Budget Deficit: A Win-Win Solution?" August 2012.

⁵³ See, for example: "Policy Basics: The Earned Income Tax Credit," Center on Budget and Policy Priorities. Updated April 19, 2018. <https://www.cbpp.org/research/federal-tax/policy-basics-the-earned-income-tax-credit>

⁵⁴ <https://www.ssa.gov/planners/credits.html>

⁵⁵ <https://www.ssa.gov/pubs/EN-05-10070.pdf>

⁵⁶ <https://www.ssa.gov/oact/STATS/table4a3.html>

⁵⁷ See, for example: "Are Medicare and Social Security Earned Benefits that Should Not be Touched?" Committee for a Responsible Federal Budget. August 6, 2015. <https://www.crfb.org/blogs/are-medicare-and-social-security-earned-benefits-should-not-be-touched>; and "Social Security: Do 'Earned Benefits' Stand in the Way of Effective Reforms?" Andrew Biggs. June 14, 2016. <https://www.forbes.com/sites/andrewbiggs/2016/06/14/social-security-do-earned-benefits-stand-in-the-way-of-effective-reforms/#547a99481482>.

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Alternatively, revenues from a carbon tax could be used to finance narrowly tailored, pro-growth reforms to the Social Security program. In this case, carbon tax revenues could help provide the missing revenue piece that allows for some pro-growth reforms to Social Security. For example, Koenig, Fichtner and Gale (2018) have proposed creating mandatory add-on private savings accounts funded by employee and employer contributions, plus a progressive government contribution. These Supplemental Transition Accounts for Retirement, or STARTs, would be fully integrated into the Social Security program. Every individual with a START would be required to exhaust that account's assets before receiving retired worker benefits or age-based spousal or survivor benefits (special rules would apply to workers receiving disability benefits). For many people, STARTs would serve to raise the age at which Social Security benefits would first be paid. Thus, the proposal would reduce the total actuarial reduction or increase the delayed retirement credits that would apply, resulting in higher monthly benefits over the life of the beneficiary.⁵⁸ The START account proposal would be funded by a 2-percentage-point increase in the payroll tax, but could instead be funded with revenues from a carbon tax.

Carbon tax revenues could also be used to offset the negative effects that payroll taxes have on older workers. The basic Social Security benefit formula is designed to impose net incremental income losses on those who extend their working careers.⁵⁹ Previous studies by Blahous (2010);⁶⁰ Goda, Shoven and Slavov (2007);⁶¹ and others have explained

how returns on contributions generally diminish the longer an individual works, and why benefits sharply decrease once a worker has contributed for 35 years.

The primary reason for the work disincentive is the progressive nature of the Social Security benefit formula, which is based on a worker's top 35 years of earnings on average. The longer one works, the more "zero earnings" years in one's wage history are replaced with positive earnings years, making the "average earnings" rise (so that one is gradually considered a relatively higher wage earner) and, in turn, the worse one's returns become under the program's progressive benefit formula.⁶²

This worsening becomes particularly pronounced after 35 years of earnings,⁶³ when the best a worker can hope for is to replace a previous year in the highest 35 years of one's wage history with a higher earnings year. That is to say, after 35 years of work, one's benefit can only rise in proportion to the differential between two previous earnings years, despite paying a full additional year of payroll taxes. Indeed, someone who takes a part-time "transition job" on the way to full retirement may well pay a full year's worth of additional taxes while receiving no additional benefit credits whatsoever. This embodies a substantial work disincentive at precisely the time when a worker is likely to make a retirement decision. Hence, carbon tax revenues could also be used to offset the elimination of Social Security payroll taxes for those older workers to encourage continued labor force participation.

⁵⁸ "Supplemental Transition Accounts for Retirement: A Proposal to Increase Retirement Income Security and Reform Social Security," Koenig, Fichtner and Gale. August 2018.

⁵⁹ "When to Start Receiving Retirement Benefits," Social Security Administration. <http://www.socialsecurity.gov/pubs/10147.pdf>.

⁶⁰ "Social Security and Work," Charles Blahous. 2010.

⁶¹ "Removing the Disincentives in Social Security for Long Careers," Goda, Shoven and Slavov. May 2007. <https://www.nber.org/papers/w13110>.

⁶² See Testimony of Charles Blahous before the Subcommittee on Social Security of the U.S. House of Representatives Committee on Ways and Means, July 8, 2011. <http://waysandmeans.house.gov/uploadedfiles/blahoustestimony78.pdf>

⁶³ "Removing the Disincentives in Social Security for Long Careers," Goda, Shoven and Slavov. May 2007. <https://www.nber.org/papers/w13110>.

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Andrew Biggs wrote in a 2012 Wall Street Journal article that eliminating the 12.4 percent payroll tax for those ages 62 and over would have reduced Social Security revenues by 2.2 percent, or roughly \$16.2 billion in 2012, based on his estimates.⁶⁴

Mark Warshawsky has proposed eliminating the Social Security payroll tax for both employees and employers once the worker has earned 180 quarters of coverage. For a worker who earns the maximum of four quarters of coverage per year, this would be equivalent to 45 years of fully covered employment.⁶⁵ The Social Security Administration's Office of the Chief Actuary has officially scored this policy proposal and estimates that this provision, if started in 2019, would worsen the long-range actuarial balance of the program by 0.52 percent of taxable payroll.⁶⁶ This amounts to roughly \$38 billion a year, which could more than be offset by a carbon tax of \$10 per metric ton.⁶⁷

A carbon tax set at as low as \$10 per metric ton would likely raise more than enough revenue to eliminate the payroll tax on those ages 62 and over, or more targeted to those with 180 quarters of coverage. Again, recall that under the model created by Resources for the Future, over a 10-year period, a carbon tax would raise \$496.6 billion using a stationary \$10/MT, or \$49.6 billion per year.⁶⁸

While revenues from a carbon tax could be used for myriad public policy proposals, including expanding Social Security benefits, it is important to keep in mind that a properly designed carbon tax system should not only reduce carbon emissions, but also promote economic growth. Proposals that use revenues from a new carbon tax to exacerbate existing disincentives to work, saving and investment, or that create new disincentives, will not be pro-growth and could ultimately end up impacting economic activity negatively.

POLICY PROVISION	ESTIMATED ANNUAL COST IN FIRST YEAR	INITIAL ESTIMATED LEVEL OF CARBON TAX TO OFFSET POLICY PROVISION
2-Percentage-Point Payroll Tax Reduction	\$150 billion	\$40 per metric ton CO ₂
START Accounts at 2 percent of covered wages	\$150 billion	\$40 per metric ton CO ₂
Warshawsky – Eliminate Social Security Payroll Taxes after 180 quarters of coverage	\$38 billion	\$10 per metric ton CO ₂

Note: Author's estimates based on Social Security Administration data and Resources for the Future E3 Carbon Tax Calculator.

⁶⁴ "A Payroll Tax Cut Could Help Social Security," Andrew Biggs. *Wall Street Journal*. April 24, 2012. <https://www.wsj.com/articles/SB10001424052702303592404577361983164779666>.

⁶⁵ For more detailed information on Warshawsky's plan, see: https://www.ssa.gov/oact/solvency/Warshawsky_20080917.pdf

⁶⁶ Based on estimates in the 2018 Trustees Report. See, F.2: https://www.ssa.gov/oact/solvency/provisions_tr2018/summary.html.

⁶⁷ Author's estimates based on Social Security Administration data and Resources for the Future E3 Carbon Tax Calculator.

⁶⁸ "Introducing the E3 Carbon Tax Calculator: Estimating Future CO₂ Emissions and Revenues," Marc Hafstead. September 25, 2017. <https://www.resourcesmag.org/common-resources/introducing-the-e3-carbon-tax-calculator-estimating-future-co2-emissions-and-revenues/>.

CONCLUSION

There is growing public and media interest in policies to tax carbon. Whether this growing interest is based on environmental concerns, desires for new revenue sources, or dissatisfaction with inefficient regulation, it is paramount that any policy targeting carbon emissions be designed to improve economic efficiency. A properly designed carbon tax system would not only reduce carbon emissions, but also promote economic growth while minimizing the burden borne by those disproportionately affected.

Traditional opposition from conservatives to a carbon tax is changing rapidly, prompting many conservatives to develop policies to address climate change while holding true to the conservative values of free markets, limited government and fiscal responsibility. Conservatives must anticipate changing public opinion among their constituents and strategically prepare policies that address climate change while promoting economic growth. Being proactive is necessary; otherwise, the likely outcome will be more economy-harming regulation to curb carbon emissions rather than market-based solutions. Recall that under President Obama, command-and-control regulations were implemented to reduce carbon emissions and combat climate change. Likewise, many of the Democratic candidates running for Congress have endorsed additional regulations or a carbon tax, but do not propose the use of revenues to offset other taxes that are harmful to economic growth. Further, many Congressional Democrats have signed on to the "Green New Deal," a package of proposals that rely heavily on non-market-based regulatory solutions to curb carbon emissions.⁶⁹

If conservative policymakers want to minimize volatility in the change of the regulatory landscape during shifts in political control, Republicans must proactively create and advocate for policies to reduce carbon emissions while minimizing any harm to the economy. A revenue-neutral carbon tax where the proceeds are used to reduce the payroll tax is pro-growth, pro-work and pro-family. It would also be a progressive tax cut for millions of Americans.

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⁶⁹ "What is the Green New Deal? A Climate Proposal, Explained," *New York Times*. February 21, 2019. <https://www.nytimes.com/2019/02/21/climate/green-new-deal-questions-answers.html>.

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