

Public Views on a Carbon Tax Depend on the Proposed Use of Revenue

a report from the National Surveys on Energy and Environment

Introduction

Conventional wisdom holds that a carbon tax is a political non-starter. However, results from the latest version of the National Surveys on Energy and Environment (NSEE) provide evidence of substantial public support for a tax on the carbon content of different fossil fuels when specific uses of tax revenue are attached. A majority of respondents support a revenue-neutral carbon tax, and an even larger majority support a carbon tax with revenues used to fund research and development for renewable energy programs. The carbon tax coupled with renewable energy research earns majority support across all political categories, including a narrow majority of Republicans. These findings generally confirm previous NSEE results when revenue use options are linked to carbon taxation. These are among the latest findings from the Spring 2014 NSEE from the Center for Local, State, and Urban Policy at the University of Michigan and the Muhlenberg College Institute of Public Opinion.

Key Findings

1. Most Americans oppose a carbon tax when the use of tax revenue is left unspecified. Overall support for such a tax is 34% in the latest NSEE survey. Attaching a specific cost to the carbon tax reduces overall support to 29%.
2. A revenue-neutral carbon tax, in which all tax revenue would be returned to the public as a rebate check, receives 56% support. The largest gains in support come from Republicans.
3. A carbon tax with revenues used to fund research and development for renewable energy programs receives 60% support, the highest among tax options that we presented. Majorities of Democrats, Republicans, and Independents each express support for this tax.
4. Most respondents oppose a carbon tax with revenues used to reduce the federal budget deficit. Overall support for such a tax is 38% with a majority of Democrats, Republicans, and Independents each expressing opposition to this tax.
5. When asked which use of revenue they prefer if a carbon tax were enacted, pluralities of Democrats, Republicans, and Independents each prefer renewable energy over tax rebate checks or deficit reduction.

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The Policy Landscape

Recent surveys indicate that the American public has become slightly more skeptical about climate change after the cold winters of 2013 and 2014.¹ However, the latest report from the Intergovernmental Panel on Climate Change (IPCC) reflects a strong scientific consensus that temperatures are on a long-run upward trend and that greenhouse gas emissions are an important contributor to this warming. The IPCC report also emphasizes the risk of serious long-term effects from climate change under a “business-as-usual” scenario. Concerned environmentalists, economists, and policymakers in the US and elsewhere continue to discuss a range of policies to mitigate the potential impacts of climate change.

In the US, Congress is not currently considering any climate change legislation. However, the Obama Administration has pursued regulation of carbon dioxide as a greenhouse gas through the Environmental Protection Agency. Climate change policy is also being pursued by a number of US states, with 10 currently committed to some form of cap-and-trade. Efforts in other countries include carbon taxes in Australia, many European Union Member States, and the Canadian province of British Columbia; national cap-and-trade systems are operational in the European Union and under development in China and South Korea.

Economists have long argued that market-based emissions policies, such as a carbon tax or cap-and-trade, are superior to technology mandates or performance standards. By concentrating emissions cuts at firms and plants that are most able to bear them, market-based policies can achieve a given emissions goal more cost effectively than direct regulation. Until recently, cap-and-trade was favored in policy circles. However, after efforts to introduce a US cap-and-trade system died in the Senate in 2010, many US economists and policymakers began reconsidering the merits of a carbon tax. Some analysts and policymakers have discussed the possibility of including a carbon tax as part of broader tax reform or as a source of revenue to reduce budget deficits. Such a tax may be one option for states seeking to comply with EPA’s new carbon-reduction mandate for the electricity sector.

This report summarizes key findings on the issue of public support for a carbon tax drawn from the Spring 2014 National Survey on Energy and Environment (NSEE). In previous iterations of the NSEE and other surveys, a carbon tax has regularly polled poorly, although significant shifts in opinion have tended to follow explicit statements about some proposed linkages with revenue use.² The Spring 2014 NSEE finds that most Americans oppose a carbon tax when no use of revenue is specified. However, two of the three variants of a carbon tax with specific uses of revenue attached garner clear majority support. The first is a revenue-neutral carbon tax that would return all revenue back to the public in the form of tax rebate checks. The second is a carbon tax with revenue used to fund research and development for renewable energy programs. In contrast, most respondents continue to oppose a carbon tax with revenue used to reduce the federal deficit.

Climate change is a highly politicized issue, and we find strong evidence of a partisan divide. Democrats express more support for all the policies in our survey than Republicans do, with Independents generally clustering more closely to Democrats. However, respondents across all parties express considerably more support for a carbon tax when a use of revenue is attached. The carbon tax paired with renewable energy research garners majority support in all political categories, including among Republicans.

1 Borick, C., & Rabe, B. G. (2014, June). *American acceptance of global warming retreats in wake of Winter 2014*. National Surveys on Energy and Environment Policy Report. Ann Arbor, MI: Center for Local, State, and Urban Policy at the Gerald R. Ford School of Public Policy, University of Michigan. Retrieved from <http://issuu.com/closup/docs/ieep-nsee-2014-spring-climate-belie/1?e=1661894/8217264>

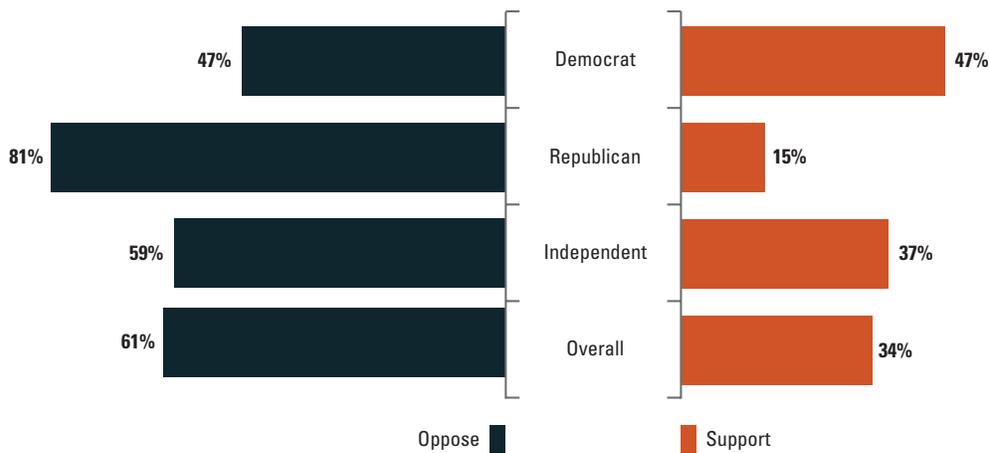
2 Lachapelle, E., Borick, C., & Rabe, B. G. (2014, June). *Public opinion on climate change and support for various policy instruments in Canada and the US: Findings from a comparative 2013 poll*. National Surveys on Energy and Environment Policy Report. Ann Arbor, MI: Center for Local, State, and Urban Policy at the Gerald R. Ford School of Public Policy, University of Michigan. Retrieved from <http://issuu.com/closup/docs/ieep-nsee-2013-fall-canada-us/1?e=1661894/8217260>



Limited Support for a Carbon Tax with No Use of Revenue Specified

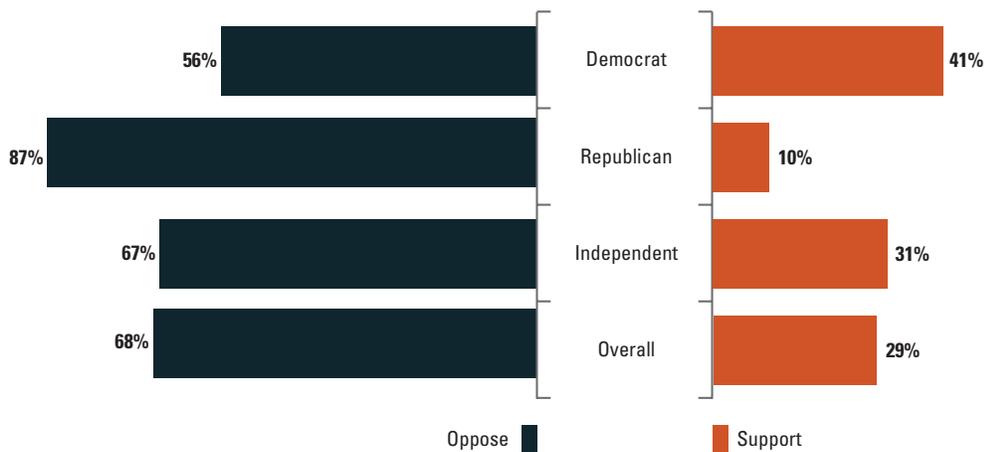
The first policy question in our survey asked about support for a tax on carbon-based fuels such as coal, oil, and natural gas. No specific use of revenue was provided. Consistent with past surveys, overall support was low. *Figure 1* shows the results. Overall, the carbon tax registers 34% support.³ Republicans are much less likely (15%) than Democrats (47%) or Independents to support this tax, while Independents (37%) are closer to Democrats than to Republicans. A follow-up question attached a concrete cost to the tax, indicating that it would increase energy costs by 10 percent a month. With the cost in the foreground, support softens somewhat across all political categories, as *Figure 2* shows. Overall support drops to 29%.

Figure 1
Support for a carbon tax (no specified use of revenue)



The survey question asked about support for “a policy to reduce greenhouse gases by taxing carbon-based fuels such as coal, oil, and natural gas at the federal level.” Based on responses from 259 Democrats, 221 Republicans, 217 Independents, and 101 others (not shown).

Figure 2
Support for a carbon tax despite higher energy costs



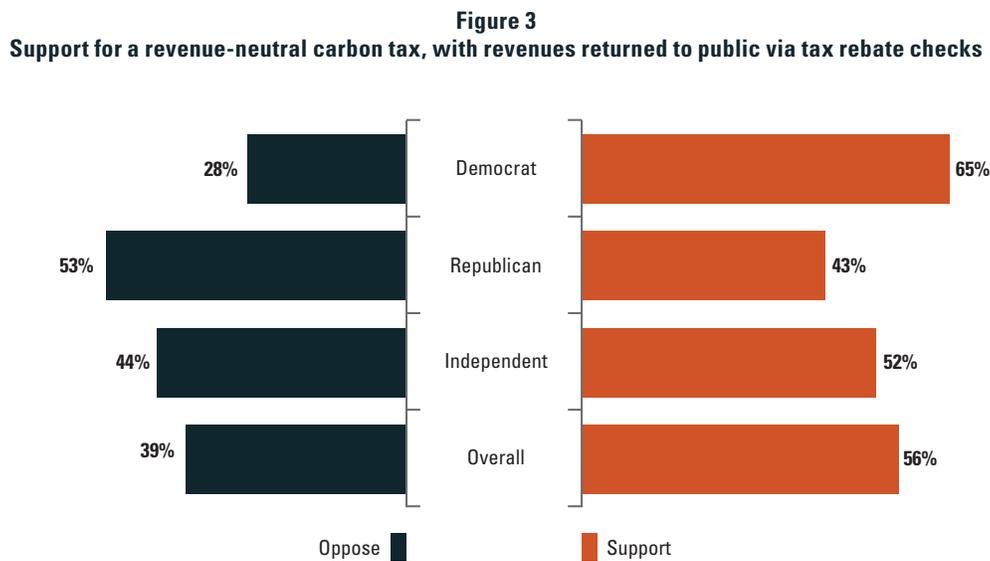
The survey question asked about support for “a carbon fuels tax that significantly lowered greenhouse gases but increased your energy costs by 10 percent a month.” Based on responses from 259 Democrats, 221 Republicans, 217 Independents, and 101 others (not shown).

³ In the survey, respondents could choose among four options for all policy-related questions: strongly support, somewhat support, somewhat oppose, or strongly oppose. To simplify the presentation, we have collapsed “strongly support” and “somewhat support” into a single category of support; likewise, we collapsed “strongly oppose” and “somewhat oppose” into a single category of opposition. Totals for the disaggregated categories are available on request. Overall percentages also reflect sample weights; see the Methodology section for details. Unweighted percentages are very similar to weighted percentages and are also available on request.

Substantial Support for a Carbon Tax with Directed Revenue

Public views on carbon taxation, however, change markedly when specific uses of revenue are included in the survey question. For example, the next question on the survey asked about a revenue-neutral carbon tax. The main goal of a carbon tax in the eyes of many policy analysts and advocates is not to raise money for the government. Instead, the goals are to incentivize people and businesses to use less carbon-based fuels and to encourage innovation of non-carbon-based energy sources. A revenue-neutral carbon tax could achieve a meaningful reduction in carbon emissions without changing the size of government, thus potentially appealing to fiscal conservatives. British Columbia offers a prominent example, as its \$30 per ton carbon tax is revenue-neutral, with initial tax rebate checks now replaced with commensurate reductions in other tax rates imposed on provincial residents.

Figure 3 shows 56% overall support for a revenue-neutral carbon tax, an increase of 27 percentage points over the previous carbon tax question, which specified a cost but left the revenue use unspecified. Over the previous question, support increases by 24 percentage points among Democrats, by 33 percentage points among Republicans, and by 21 percentage points among Independents.

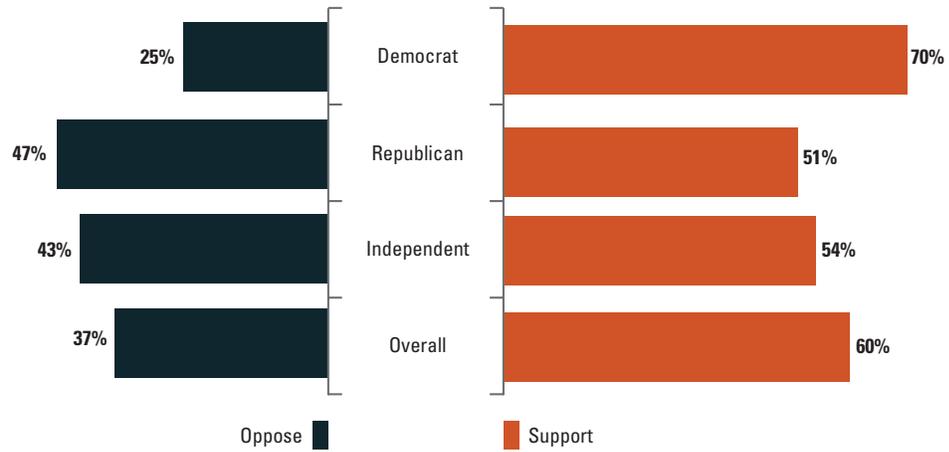


The survey question asked about support for “a carbon fuels tax that is ‘revenue-neutral,’ meaning that every dollar collected by the federal government would be returned to the public as a rebate check.” Based on responses from 259 Democrats, 221 Republicans, 217 Independents, and 101 others (not shown).

Another option is a carbon tax with revenue used to fund research and development for renewable energy programs. One model for this would be the currently operational Regional Greenhouse Gas Initiative involving nine Northeastern states, which uses auction revenues for carbon allowances under its cap-and-trade program to fund renewable energy and energy efficiency projects in those states. The survey also asked about support for such a tax; Figure 4 reports the results. This was the most popular of the carbon tax proposals on the survey, with 60% overall support. Notably, a majority of respondents within each political category support the tax – including a narrow majority (51%) of Republicans. Relative to the second carbon tax question, which specified a cost but left the revenue use unspecified (see Figure 2), support increased by 29 percentage points among Democrats, by 41 percentage points among Republicans, and by 23 percentage points among Independents. Again, the degree of increased support among Republicans is noteworthy, especially since support for renewable energy tends to be associated more with the Democratic Party. Democratic support for this proposal is very high (70%), but Democratic support for the “unspecified” carbon tax with cost is also high (41%), making the gain in support smaller for Democrats than Republicans.



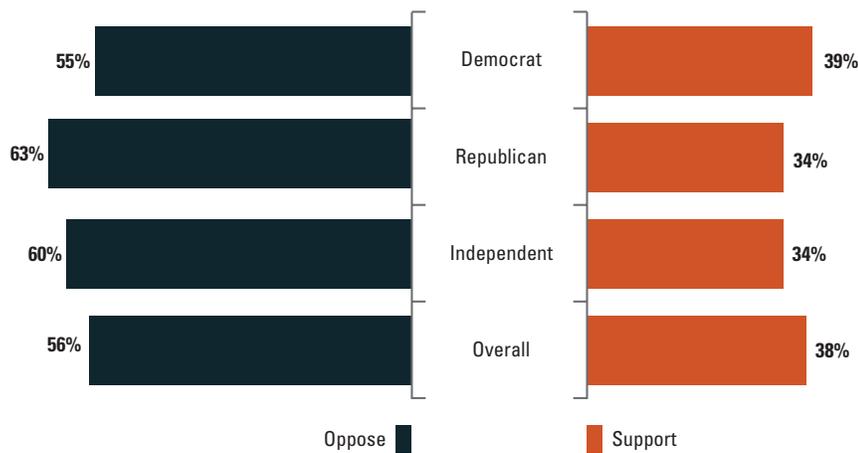
Figure 4
Support for a carbon tax with revenue used for research and development for renewable energy programs



The survey question asked about support for a carbon tax if “revenues from the tax were used to fund research and development for renewable energy programs.” Based on responses from 259 Democrats, 221 Republicans, 217 Independents, and 101 others (not shown).

Some policy analysts have proposed pairing a carbon tax with a long-term deficit-reduction plan, using revenues to reduce existing deficits. Ireland adopted a carbon tax in 2008 primarily as a mechanism to increase revenue to reduce staggering fiscal deficits. To explore this idea, the survey next proposed a carbon tax with revenues used to reduce the federal deficit. As *Figure 5* shows, this proposal polled poorly relative to the revenue-neutral tax and the tax with revenues used for renewable energy (see, respectively, *Figures 3 and 4*). Overall support is 38%, higher than the “unspecified” carbon tax with cost. Relative to that question, support actually decreased by two percentage points among Democrats. For Republicans, it increased by 24 percentage points, and for Independents, it increased by three percentage points. Given the Republican Party’s emphasis on reducing the deficit, it is interesting that Republican support for this version of the carbon tax is clearly the lowest among the three revenue uses proposed in this survey.

Figure 5
Support for a carbon tax with revenue used for deficit reduction



The survey question asked about support for a carbon tax if “revenues from the tax were used to reduce the federal deficit.” Based on responses from 259 Democrats, 221 Republicans, 217 Independents, and 101 others (not shown).

A follow-up question explored the topic of revenue use from another angle. If the government were to pass a carbon tax, the survey asked which of three revenue uses the respondent would prefer: tax rebate checks, research and development for renewable energy programs, or deficit reduction. *Table 1* presents the results. Consistent with the results above, the overall preference was for renewable energy programs (36%), followed by tax rebate checks (32%) and then a tie for last place between deficit reduction and unsure (16%). A plurality among each political group preferred renewable energy programs. This is a particularly interesting result in the case of Republicans, who preferred that the revenue be spent on renewable energy rather than be returned to taxpayers.

Table 1
Preferred use of carbon tax revenue if tax is enacted

	Democrat	Republican	Independent	Overall
Tax rebate checks	33%	24%	32%	32%
Renewable energy	44%	32%	36%	36%
Deficit reduction	12%	21%	13%	16%
Not Sure/Refused	10%	23%	19%	16%

The survey question asked “if the federal government enacted a carbon fuels tax, which of the following options would you most prefer?” Based on responses from 259 Democrats, 221 Republicans, 217 Independents, and 101 others (not shown).

Conclusion

The cold winters of 2013 and 2014 have eroded the public’s beliefs in the existence of global warming, and the recent political landscape has not favored legislative action on climate change at the federal level. Nonetheless, several states and many other countries are moving ahead with market-based climate change mitigation policies and recent regulatory steps by the US Environmental Protection Agency may reopen this discussion in many states.

Conventional wisdom holds that a carbon tax, while attractive on economic grounds, is a political non-starter. The survey results reported here suggest that this conclusion may be premature. Support for a carbon tax depends strongly on the proposed use of tax revenue. A solid majority of respondents in our survey support both a revenue-neutral carbon tax and a tax with revenues used to fund research and development for renewable energy programs. Perhaps surprisingly, the preferred use of revenue among all political affiliations is renewable energy. There may be more support for a carbon tax than is commonly believed.



Methodology

This report summarizes data collected in a telephone survey of residents of the United States between March 24 and April 9, 2014. Individual households and cell phones throughout the United States were selected randomly for inclusion in the study. The sampling of phone numbers used in the survey was generated by the Marketing Systems Group of Fort Washington, PA. Interviewing was conducted by the staff of the Muhlenberg College Institute of Public Opinion, with 798 surveys completed. Of the 798 surveys, 425 were completed on land lines and 373 were completed on cell phones. The total number of completions results in a margin of error of +/- 3.5% at the 95% confidence level. However, the margin of errors for subgroups (e.g., Democrats, Republicans, and Independents) is larger due to smaller sample size. Totals of percentages in figures may not equal 100% due to rounding. The American Association of Public Opinion Research (AAPOR) response rate (RR2) was 12%. The data has been weighted by age, gender, educational attainment, race, and income. The instrument was designed by David Amdur and Christopher Borick of Muhlenberg College and Barry Rabe at the University of Michigan.

Survey Iteration	Fielding Dates	Sample Size	Margin of Error
Fall 2008	September 8 - September 24, 2008	603	+/-4%
Fall 2009	September 21 - October 20, 2009	988	+/-3%
Spring 2010	March 22 - April 9, 2010	726	+/-4%
Fall 2010	November 15 - December 9, 2010	916	+/-3.5%
Spring 2011	March 18 - April 5, 2011	712	+/-4%
Fall 2011	December 4 - December 21, 2011	887	+/-3.5%
Spring 2012	March 27 - April 14, 2012	729	+/-4%
Fall 2012 (Early)	September 26 - October 11, 2012	917	+/-3.5%
Fall 2012 (Late)	November 26 - December 5, 2012	998	+/-3.5%
Spring 2013	April 1 - April 14, 2013	853	+/-3.5%
Fall 2013	October 3 - October 14, 2013	948	+/-3.5%
Spring 2014	March 24 - April 9, 2014	798	+/-3.5%

Funding and Financial Disclosure

All funding for this survey was provided by general revenues of the Center for Local, State, and Urban Policy at the Gerald R. Ford School of Public Policy at the University of Michigan and the Muhlenberg Institute of Public Opinion at Muhlenberg College. None of the co-authors accepted any stipend or supplemental income in the completion of the survey or this report. All interviews were conducted by live interviews under the supervision of the Muhlenberg College Institute of Public Opinion.

*Afterword



David Amdur died very shortly after completing an initial analysis of this data and draft of this report. He was killed in a tragic accident and leaves behind a loving family and an admiring set of student and faculty colleagues. We are honored to consider ourselves as part of the latter group and had enthusiastically welcomed David into our NSEE team with this round of survey analysis. And we had surely looked forward to much more engagement with him in the coming months and years. It is our privilege to continue this work and to note that David is the senior author of this work and more to come.

— Barry Rabe and Christopher Borick

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