

Public Opinion on Climate Policy Options

a report from the National Surveys on Energy and Environment

Introduction

This report presents the views of American citizens on a range of issues linked to the possible development of federal and state policies intended to reduce greenhouse gas emissions.

This report responds to the evolving American debate over alternative roles that federal and state governments might play in attempting to address the issue of climate change, including specific policies that have either been enacted or remain under serious consideration in Washington, D.C. or in state capitals. The findings are drawn from a Fall 2012 telephone survey conducted under the auspices of the National Surveys on Energy and Environment (NSEE), which reflect a formal partnership between the Muhlenberg Institute of Public Opinion at Muhlenberg College and the Center for Local, State, and Urban Policy at the Gerald R. Ford School of Public Policy at the University of Michigan. This survey secured responses from 917 American citizens, drawn from all regions of the nation and comprising a statistically representative profile of the citizenry.

Key Findings

1. Substantial majorities of respondents believe that federal, state, and local governments should assume either “a great deal” or “some” responsibility for addressing climate change. Support levels increased for all three government levels from prior surveys, including a 51 percent level of support for the federal government to take “a great deal of responsibility” on this issue.
2. There is overwhelming support for two policy options that are intended to reduce greenhouse gas emissions: renewable electricity standards and mandatory increases in vehicle fuel efficiency. However, support for both declines significantly under a scenario in which specific cost increases of purchasing electricity or vehicles are linked to each policy.
3. A narrow plurality supports establishing a tax applied to multiple fossil fuels to reduce greenhouse gas levels. This is contrary to a number of our earlier studies that found solid majority opposition to this option. Support for the tax declines when a specific cost is attached to the policy, though this shift is not as extensive as for the other policies examined.
4. Most Americans appear to have little understanding of the current level of federal gasoline taxation, as well as whether those taxes have been increased in recent years.
5. If given scenarios under which either fossil fuels are taxed or an existing federal gasoline tax is increased, repeal of those taxes is only the second most popular option among six specific choices presented to respondents. Instead, usage of tax revenues for renewable energy research is clearly the most popular option, followed by tax repeal and usage of funds for deficit reduction. Other optional uses of the revenue proved significantly less popular.

Authors

Barry G. Rabe

J. Ira and Nicki Harris Professor of Public Policy
Director, Center for Local, State, and Urban Policy
Gerald R. Ford School of Public Policy
University of Michigan
Non-Resident Senior Fellow
Governance Studies Program
Brookings Institution
brabe@umich.edu

Christopher Borick

Professor of Political Science
Director, Muhlenberg Institute of Public Opinion
Muhlenberg College
cborick@muhlenberg.edu

The Current Landscape of Climate Change Policy

Climate change surfaced only occasionally in the now-completed 2012 national elections. Neither newly re-elected President Barack Obama nor his challenger, Governor Mitt Romney, made much mention of the issue, much less indicated what they might do about climate change in the event they were elected. The same appears to have applied to the vast majority of races for the United States Senate and the House of Representatives. A few state races did engage climate change and related state government policies, however; most notably gubernatorial races in New Hampshire, North Carolina, and Washington.

Perhaps the single most vivid debate on climate change during the campaign occurred very close to Election Day, when Hurricane Sandy on the Northeastern Coast triggered considerable media discussion over whether its severity was linked to climate change. New York Mayor Michael Bloomberg concluded that they may indeed have been connected and used that as a partial reason for his endorsement of President Obama, given his expectation that Mr. Obama would likely be more active on this issue than Mr. Romney. Yet, President Obama's passing reference to climate change in his election night acceptance speech gave no hint of what he might propose on this issue in a second term. It remains very difficult to see the 2012 elections as having offered serious discussion on the issue of climate change or consideration of various policy options to either mitigate or adapt to it.

The national election cycle of 2012 now yields to the policy cycle of 2013, with the very role of the federal and state governments under some scrutiny and a series of specific policy options either moving into implementation or toward some degree of legislative and bureaucratic scrutiny. A number of these policies are not exclusively focused on greenhouse gas mitigation, but climate change considerations have clearly been a factor in their advancement. One option that has resurfaced in recent months is the idea of taxing the carbon content of fossil fuels. At the federal level, this has involved a series of private and public meetings involving ideologically diverse think tanks and congressional staffs on the desirability and possible ramifications of a national carbon tax. At the sub-federal level, Michigan and other states have begun to revisit their gasoline excise taxes and alternative ways to raise funds for the transportation sector. Consequently, one key portion of this report addresses the issue of carbon taxation as a policy option.

Public Views on Climate Change Policy Options

The Fall 2012 climate change survey of the National Surveys on Energy and Environment (NSEE) examined public opinion on a number of these issues in the weeks immediately prior to the November 6 election, but prior also to the arrival of Hurricane Sandy. The NSEE climate change survey has been conducted twice annually since Fall 2008, reflecting a formal partnership between the Muhlenberg Institute of Public Opinion at Muhlenberg College and the Center for Local, State, and Urban Policy at the Gerald R. Ford School of Public Policy at the University of Michigan. Formerly known as the National Survey of American Public Opinion on Climate Change (NSAPOCC), the climate survey has now been folded into an expanded set of related surveys addressing a range of interrelated energy and environmental policy issues. This will include considerable new work on public opinion on the generation of shale gas through hydraulic fracturing techniques.

This report on the Fall 2012 climate change survey reviews findings on public opinion on a range of climate policy issues, to be followed by a separate report outlining public views on the existence of climate change and possible factors shaping public understanding of the issue. In some instances, these reports will examine trends for questions asked throughout the history of our climate surveys; in others, they will review questions never asked previously.



Should Federal, State, or Local Governments Take Responsibility?

Climate change has been a focal point of policy proposals across the respective levels of American government over the past decade. Substantial scholarly literature has addressed the capacity of these governmental levels to adopt climate policies, with particular emphasis on state and local policy initiatives amid extended federal gridlock on this matter. Every Fall beginning in 2008, we have routinely asked what degree of responsibility federal, state, and local levels of government have “for taking actions to reduce global warming.” Our Fall 2012 results find that support for all levels of American government to assume “a great deal of responsibility” has increased significantly from surveys conducted during the past two years. Table One shows the Fall 2012 distribution of responses for federal, state, and local governments.

Table 1
Responsibility for Reducing Global Warming, by Level of Government

	A Great Deal of Responsibility	Some Responsibility	No Responsibility	Not Sure
The federal government	51%	22%	21%	6%
State governments	44%	28%	22%	7%
Local governments	38%	30%	26%	7%

Question: “For each level of government that I mention, please tell me if it has a great deal of responsibility, some responsibility, or no responsibility for taking actions to reduce global warming.”

Support for “a great deal” of federal responsibility has rebounded above the 50 percent mark for the first time since Fall 2009, with an increase of nearly 10 percentage points from Fall 2010 and Fall 2011 levels to the most recent period under study. In turn, support for state and local governments to assume “a great deal” of responsibility on this issue have attained their highest levels in the history of the survey in Fall 2012, with states reaching 44 percent and local governments at 38 percent. Both of these results reflect increases in support roughly comparable with the change noted at the federal level. Table Two provides a full review of all prior responses to these questions at federal, state, and local levels between 2008 and 2012.

Table 2
Percentage of Americans Who Believe that Government has a Great Deal of Responsibility for Taking Actions to Reduce Global Warming

	Fall 2008	Fall 2009	Fall 2010	Fall 2011	Fall 2012
The federal government	48%	53%	43%	42%	51%
State governments	34%	37%	35%	32%	44%
Local governments	26%	34%	29%	29%	38%

Does the Public Support Specific Climate Policy Options?

Prior versions of our climate surveys have found that public support tends to be greatest for policies that do not specifically impose a direct cost on consumers. Consequently, policies focused on industry as opposed to directly on consumers, such as renewable energy standards and vehicle fuel efficiency mandates have tended to receive solid majority support, often cutting across partisan divides. In contrast, policies that are characterized as imposing a cost directly on consumers, such as carbon taxes or specific energy taxes, have generally tended to receive strong majority opposition.

Our Fall 2012 survey revisited these issues, not only offering a range of policy options as in previous surveys, but also offering them with a specific price tag attached to each of them. This section of the survey focused on three specific policies. First, it examined a proposal to establish a renewable energy standard that reached a 25 percent level by 2025, similar to a proposal that was placed on the 2012 ballot in the form of a constitutional amendment in Michigan. Twenty-nine states already have some version of this policy in place, many aimed at reaching renewable energy levels between 20 and 30 percent. Second, it examined a proposal to increase vehicle fuel economy from the current level of 30.2 miles per gallon to 54.5 miles per gallon by 2025, similar to a policy that has been approved by the Obama Administration and is now moving into its early stages of implementation. This policy reflected considerable pressure from California and allied states to create a more rigorous federal standard. Third, it examined a proposal to increase taxes on the use of fossil fuels such as coal, oil, and natural gas, similar to proposals that have surfaced periodically in recent congressional sessions. Such tax policies have begun to re-emerge in the past year in concert with discussions over possible ways in which the federal government might raise added revenues to address massive fiscal deficits. It also reflects expanding state interest in considering new ways to raise revenues from energy use, most notably via gasoline excise taxes or various fees that are commonly known as “social benefit charges.”

In this version of the survey, we then followed a question about each of these options with a supplemental question that also noted that the policy would produce a corresponding price increase of “about 10 percent.” The intent was to see both initial response to the general policy option and then examine any shifts once a cost estimate was made explicit.

Prior experience with questions asking about support for various climate change-related policy options would suggest far greater levels of support for the renewable energy standard and the vehicle fuel economy standard than for the carbon fuels tax. Our findings support these expectations, as reflected in Table Three. Without a specific price tag attached to each policy option, the renewable energy standard is strongly supported by 59 percent and is somewhat supported by 19 percent of respondents, as opposed to only 17 percent who express some level of opposition. Very similar numbers emerge in the vehicle fuel efficiency case with an overall rate of 77 percent of respondents indicating some degree of support (with 60 percent strongly supportive) as opposed to only 18 percent registering some level of opposition (see Table Three).

In contrast, support levels drop significantly when the idea of increasing taxes on the burning of fossil fuels is offered as a policy option. We find higher overall rates of support for such a tax now, as compared with our earlier surveys, with 48 percent of respondents registering some level of support and 46 percent registering some level of opposition. Nonetheless, the distribution of public opinion on this policy option looks considerably different than it does for the other two policies, including a 33 percent rate reflecting strong opposition to the tax proposal (see Table Three).



Table 3
Support Levels for Various Policies to Reduce Greenhouse Gases

	Strongly Support	Somewhat Support	Somewhat Oppose	Strongly Oppose	Not Sure
A policy to reduce greenhouse gases by requiring at least 25 percent of all electricity to come from renewable energy sources , such as wind, solar, or geothermal power by 2025.	59%	19%	5%	12%	5%
A policy to reduce greenhouse gases by increasing the average fuel economy of new vehicles from the current rate of 30.2 miles per gallon to 54.5 miles per gallon by 2025.	60%	17%	6%	12%	6%
A policy to reduce greenhouse gases by increasing taxes on the burning of fossil fuels such as coal, oil, and natural gas for energy.	29%	19%	13%	33%	7%

Public reactions do change significantly in these cases when a follow-up question repeated each specific policy proposal and also indicated an increase of about 10 percent in cost. Whereas most prior survey analyses of renewable energy standards have not specified costs, this version included a 10 percent increase in electricity prices. A similar increase was projected for new vehicles featuring the expanded fuel efficiency provisions, reflected in a hike in vehicle purchase price. The tax proposal also called for a 10 percent increase in the price of fossil fuels.

In these scenarios of increased costs, support levels for all three policies dropped, but the most notable shifts involved the first two cases. Renewable energy standard opposition nearly doubled, from 17 percent without reference to cost to 35 percent with the 10 percent price hike specified. Opposition to boosting vehicle fuel economy did not increase quite as significantly, but nonetheless jumped from 18 to 30 percent. Meanwhile, the carbon tax proposal featured the most modest shift, with an increase in opposition from 46 percent to 55 percent and strong support declining by only six percentage points (from 29 percent to 23 percent) as opposed to declining by 24 percentage points in the renewable energy standard case (59 to 35 percent) and 22 points in the vehicle fuel economy case (60 to 38 percent). The energy tax option remains the least popular of the three options in both versions of the survey questions, but the differences are notably more modest when specific reference is made to anticipated costs (see Table Four).

Table 4
Support Levels for Various Policies to Reduce Greenhouse Gases with Specified Costs

	Strongly Support	Somewhat Support	Somewhat Oppose	Strongly Oppose	Not Sure
A policy to reduce greenhouse gases by requiring at least 25 percent of all electricity to come from renewable energy sources , such as wind, solar, or geothermal power by 2025, <i>if it raised the price of energy by about 10 percent?</i>	35%	25%	17%	18%	4%
A policy to reduce greenhouse gases by increasing the average fuel economy of new vehicles from the current rate of 30.2 miles per gallon to 54.5 miles per gallon by 2025, <i>if it raised the vehicle price by about 10 percent?</i>	38%	27%	12%	18%	5%
A policy to reduce greenhouse gases by increasing taxes on the burning of fossil fuels such as coal, oil, and natural gas for energy, <i>if it raised the price of energy by about 10 percent?</i>	23%	17%	14%	41%	5%

Does Revenue Allocation Influence Support for a Carbon Tax?

The idea of some form of a carbon tax has resurfaced in national policy debates in recent months, most notably as a possible way to generate revenues to address the pending “fiscal cliff.” This option also has maintained considerable support from some corporate leaders and policy analysts as a potentially more cost-effective way to reduce carbon emissions as compared to other policies. One question that has only occasionally been explored in survey research is whether the public might view such a tax differently depending upon alternative scenarios for using the new revenues. Indeed, carbon taxes in operation around the world allocate emerging revenues in very different ways. Given this, we added a question to the Fall 2012 survey that presumed federal enactment of a carbon tax, but also provided six distinct options for how to use the funds generated. Most of these options are currently in use in one or more cases where carbon taxes have been adopted internationally, whether in Member States of the European Union or in Canadian provinces such as British Columbia and Quebec. The options used in the NSEE survey included repeal of the tax itself, alongside five alternative uses of revenue if it was not repealed.

Despite the considerable initial rates of opposition to the carbon tax proposal, as noted in Tables Three and Four, “repeal” of such a tax was only the second-most-popular option, receiving 21 percent of support (see Table Five). Instead, using all of the funds created by the tax for “renewable energy research” proved the most popular, with a 36 percent level of support. Using funds for reducing the federal deficit finished third with 16 percent, a potentially significant finding for any prospective use of such a tax as a larger fiscal tool. Other options trailed notably, including the use of revenues to provide rebate checks to citizens, or to support highway and bridge repairs, or to reduce payroll taxes by equal amounts (see Table Five).

Table 5
Preferences for Use of an Increased Federal Tax on Fossil Fuels

Response	Percentage
Use all of the funds created by the tax for renewable energy research	36%
Repeal the tax	21%
Use all of the funds created by the tax to reduce the federal deficit	16%
Use all of the funds created by the tax to provide tax rebate checks to citizens	8%
Use all of the funds created by the tax to support highway and bridge repairs	6%
Use all of the funds created by the tax to reduce payroll taxes by equal amounts	5%
Not sure	10%

Question: “Now, if the federal government enacted a tax on fossil fuels such as coal, oil, and natural gas, which of the following options do you most prefer?”



What about Gasoline Taxes?

Gasoline excise taxes remain the most familiar form of an energy tax in the United States. Oregon pioneered this tax in 1919 and all 50 states now impose some version, with an average rate of 20.9 cents per gallon. Most states use these funds directly for highway and bridge construction and maintenance, often using their revenues to secure a matching share from the federal tax. However, there is enormous state-by-state variation in tax levels, ranging from lows of eight cents per gallon in Alaska and 14 cents per gallon in Wyoming to highs of 39.5 cents per gallon in North Carolina and 41.2 cents per gallon in California. The federal gasoline excise tax was established during the Eisenhower Administration, with funds designated for use in the development of the Interstate Highway System. That linkage has continued, though funds are now used for a more diverse set of transportation programs. The federal gasoline tax currently stands at 18.3 cents per gallon.

Innumerable proposals have surfaced in recent years to either increase gasoline taxes or create some alternative methods to raise revenue from driving. Such taxes resemble a carbon tax, though focused exclusively on the transportation sector, and so also have a potential impact on fossil fuel consumption and related greenhouse gas emissions. These tax reform proposals have faced considerable political resistance, attributable in part to the tremendous political sensitivity associated with gasoline prices and their unique visibility to American consumers. Indeed, the federal government has not raised its gasoline excise tax since a four-cent-per-gallon increase was enacted in 1993, and the vast majority of states have made no change in their gasoline tax rates since 2000.

The Fall 2012 NSEE climate survey explored public awareness about the federal version of this multi-level tax to determine just what the citizenry knows about current taxation levels, including whether they have changed in recent years. This included a scenario in which respondents were asked about the current federal tax rate, with five distinct options that began at 18 cents per gallon (the correct answer) and gradually expanded in twenty-cent increments to a level of 98 cents per gallon. We found that only eight percent of survey respondents selected the correct answer and 70 percent said that they did not know. The “not sure” response was not listed as a formal option, but instead reflected a voluntary response after participants heard the various options.

This suggests that Americans do not know much about what percentage of their expenses at the gasoline pump go to federal taxes. We did not ask the same question at the state level, though we intend to revisit this issue in our Spring 2013 survey. But it is difficult to envision that Americans would be substantially more informed about gasoline tax rates applied by their state than by the federal government, when the taxes are administered in similar ways and the average state rate is so close to that at the federal level (see Table Six).

We attempted to further assess public awareness by then asking whether or not the level of the federal gasoline excise tax had changed during the Obama Administration; namely, from January 2009 to the time of the survey in late 2012. There has been no change in this tax during this period, reflecting its stability since the very early stages of the Clinton Administration in the early 1990s. Once again, the most common response reflected public uncertainty, with 59 percent of respondents saying they were not sure. However, 26 percent thought the federal tax had increased during this period, whereas 15 percent said that it had not (see Table Seven).

Table 6
Perceptions of the Current Federal Gasoline Tax Level

Response	Percentage
18 Cents	8%
38 Cents	8%
58 Cents	7%
78 Cents	3%
98 Cents	4%
Not sure	70%

Question: “How much does the current federal gasoline excise tax cost per gallon? Is it...”

Table 7
Perceptions of Whether the Federal Gasoline Excise Tax has Changed During the Obama Administration

Response	Percentage
Yes	26%
No	15%
Not sure	59%

Question: “Has the level of the federal gasoline excise tax changed during the Obama Administration, or not?”

Among respondents who thought that the tax had increased, we followed with a question that provided four options concerning the actual level of increase that they thought had occurred. We found that fully 50 percent selected the highest increase option that was provided, an increase of more than 10 cents per gallon (see Table Eight). This table further suggests quite limited public awareness about the details of the tax, which is no small issue in considering future policy options.

Last, we presented a scenario similar to the one linked to a proposed carbon tax (noted above). In this case, respondents were given a series of options for how they would prefer tax revenues to be allocated if the federal government were to increase the federal excise tax on gasoline. Despite the strong historic linkage between gasoline tax revenues and infrastructure, this usage option was only supported by seven percent of respondents. Instead, as was the case in the carbon tax scenario, there was greatest support for using the funds for renewable energy research (34 percent), repeal of the tax (20 percent), or using the funds for deficit reduction (19 percent). Other options proved substantially less popular (see Table Nine).

Table 8
Perceptions of Changes in the Federal Gasoline Excise Tax During the Obama Administration

Response	Percentage
The tax increased by more than ten cents per gallon	50%
The tax increased by less than ten cents per gallon	9%
The tax decreased by more than 10 cents per gallon	1%
Not sure	38%

Question: "Which of the following best describes the changes in the federal gasoline excise tax during the Obama Administration?"

Note: Includes only respondents who believe that the federal gasoline tax has changed during the Obama Administration.

Table 9
Preferences for Use of an Increased Federal Excise Tax on Gasoline

Response	Percentage
Use all of the funds created by the tax for renewable energy research	34%
Repeal the tax	20%
Use all of the funds created by the tax to reduce the federal deficit	19%
Use all of the funds created by the tax to provide tax rebate checks to citizens	9%
Use all of the funds created by the tax to support highway and bridge repairs	7%
Use all of the funds created by the tax to cover Department of Defense costs to keep open oil shipping lanes in the Middle East	1%
Not sure	10%

Question: "If the federal government increased the federal excise tax on gasoline, which of the following options do you prefer?"



Conclusions

The Fall 2012 NSEE climate survey indicates that there has been an increase in public support for multiple levels of American government to assume “a great deal of responsibility” for addressing climate change. In turn, it indicates that there is greater support than opposition for three prominent policy options to reduce greenhouse gas emissions. Support levels differ by specific policy, however, and the inclusion of a specific cost estimate produces different levels of shift in support and opposition to the policy options. The survey further indicates that the linkage in public opinion between the imposition of a cost through some form of carbon or gasoline tax and the use of any revenue generated by such a tax may be very significant, with the greatest levels of support directed toward funding renewable energy research.

Methodology

This survey included phone interviews with 917 Americans, with fielding dates between September 26 and October 11, 2012. Land line phones were used in 561 of the completions, while cell phones were used in the remaining 356 completions. The data were weighted by gender, age, race, region, and educational attainment. The survey achieved an American Association of Public Opinion Research (AAPOR) COOP3 Cooperation Rate of 20 percent and an AAPOR RR3 Response Rate of 13 percent. The margin of error is plus/minus 3.5 percent. All surveys were conducted by the staff of the Muhlenberg Institute of Public Opinion, Muhlenberg College, Allentown, Pennsylvania.

About the Survey

The NSEE and its twice-annual climate surveys reflect a formal partnership between the Muhlenberg Institute of Public Opinion at Muhlenberg College and the Center for Local, State, and Urban Policy at the Gerald R. Ford School of Public Policy, University of Michigan. The survey is funded exclusively through support from these two institutions. Professor Christopher Borick of Muhlenberg College and Professor Barry Rabe of the University of Michigan are co-directors of the study. Neither of the co-directors receive any supplemental income through this survey. The authors are grateful for the editorial assistance of Roxanne Balmas and the thoughtful comments of Thomas Ivacko in the preparation of this report.

Looking Ahead

Future reports from the NSEE will examine other dimensions of climate change and also explore issues related to shale gas extraction via hydraulic fracturing techniques. Future climate work will build on prior analysis of American public belief in the existence of climate change and the factors that contribute to their views on this matter. Future work on shale gas will include a comparative analysis of public opinion in two states, Pennsylvania and Michigan.

University of Michigan

Center for Local, State, and Urban Policy

Gerald R. Ford School of Public Policy

Joan and Sanford Weill Hall

735 S. State Street, Suite 5310

Ann Arbor, MI 48109-3091

The **Center for Local, State, and Urban Policy (CLOSUP)**, housed at the University of Michigan's Gerald R. Ford School of Public Policy, conducts and supports applied policy research designed to inform state, local, and urban policy issues. Through integrated research, teaching, and outreach involving academic researchers, students, policymakers and practitioners, CLOSUP seeks to foster understanding of today's state and local policy problems, and to find effective solutions to those problems.

www.closup.umich.edu >> 734-647-4091



Regents of the University of Michigan

Julia Donovan Darlow
Ann Arbor

Laurence B. Deitch
Bingham Farms

Denise Ilitch
Bingham Farms

Olivia P. Maynard
Goodrich

Andrea Fischer Newman
Ann Arbor

Andrew C. Richner
Grosse Pointe Park

S. Martin Taylor
Grosse Pointe Farms

Katherine E. White
Ann Arbor

Mary Sue Coleman
(ex officio)