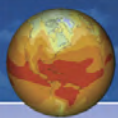


CLIMATE CHANGE IN THE AMERICAN MIND

October 2014



YALE PROJECT ON
**CLIMATE CHANGE
COMMUNICATION**
BRIDGING SCIENCE + SOCIETY



4C

George Mason University
Center for Climate Change Communication

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Introduction

This report is based on findings from a nationally representative survey – *Climate Change in the American Mind* – conducted by the Yale Project on Climate Change Communication (<http://environment.yale.edu/climate-communication>) and the George Mason University Center for Climate Change Communication (<http://www.climatechangecommunication.org>). Interview dates: October 17-28, 2014. Interviews: 1,275 Adults (18+). Average margin of error: +/- 3 percentage points at the 95% confidence level. The research was funded by the 11th Hour Project, the Energy Foundation, the Grantham Foundation, and the V.K. Rasmussen Foundation.

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CT: Yale Project on Climate Change Communication.

Key Findings

- Today, two thirds of Americans think global warming is happening (66%, up 3 percentage points since November, 2013), whereas only about one in six think it is not happening (16%, down 7 points).
- The public's understanding of what is causing global warming, however, is largely at odds with climate science. Currently, only half of Americans (50%) think that global warming, if it is happening, is mostly caused by human activities. By contrast, several recent studies have found that almost all climate scientists active in the field (e.g., 97%, according to Cook et al., 2013) have concluded that human-caused global warming is happening.
- Just over half of Americans (55%) say they are at least “somewhat worried” about global warming, but only 11% say they are “very worried” about it. Even as the impacts of global warming have increased over time, public worry has remained relatively steady, changing little over the past four years.
- According to the 2014 U.S. National Climate Assessment and other sources, the impacts of global warming are starting to be felt in the United States. Yet only one in three Americans (33%) thinks people in the U.S. are being harmed “right now” by global warming, a number that has remained steady for the past several years.
- Americans are also less likely to believe global warming will cause a “great deal” or “moderate amount” of harm to them personally (36%) than to their family (42%), people in their community (43%), people in the U.S. (53%), people in other industrialized countries (53%), people in developing countries (55%), plant or animal species (64%), or future generations of people (64%).
- Americans think both the private and public sectors should be doing more to address global warming. Majorities say corporations and industry (67%) and citizens themselves (63%) should be doing “much more” or “more” to address it.

Half or more also believe federal, state, and local governments should be doing more:

- The U.S. Congress (57%)
- My member of Congress (54%)
- My local government officials (53%)
- My governor (53%)
- President Obama (51%)

- Americans support a broad range of policies that would help reduce or respond to global warming. For example, solid majorities “strongly” or “somewhat” support the following:
 - Increased funding for improvements to local roads, bridges, and buildings to make them more resistant to extreme weather (83%)
 - Funding more research into renewable energy sources such as solar and wind power (77%)
 - Providing tax rebates to people who purchase energy-efficient vehicles or solar panels (77%)
 - Regulating carbon dioxide as a pollutant (75%)
 - Setting strict carbon dioxide emission limits on existing coal-fired power plants to reduce global warming and improve public health, where (a) power plants would have to reduce their emissions and/or invest in renewable energy and energy efficiency and (b) the cost of electricity to consumers and companies would likely increase (67%)
 - Requiring electric utilities to produce at least 20% of their electricity from wind, solar, or other renewable energy sources, even if it costs the average household an extra \$100 a year (62%)
- About one in five Americans (22%) say they are currently part of – or would “definitely” or “probably” be willing to join – a campaign to convince elected officials to take action to reduce global warming.

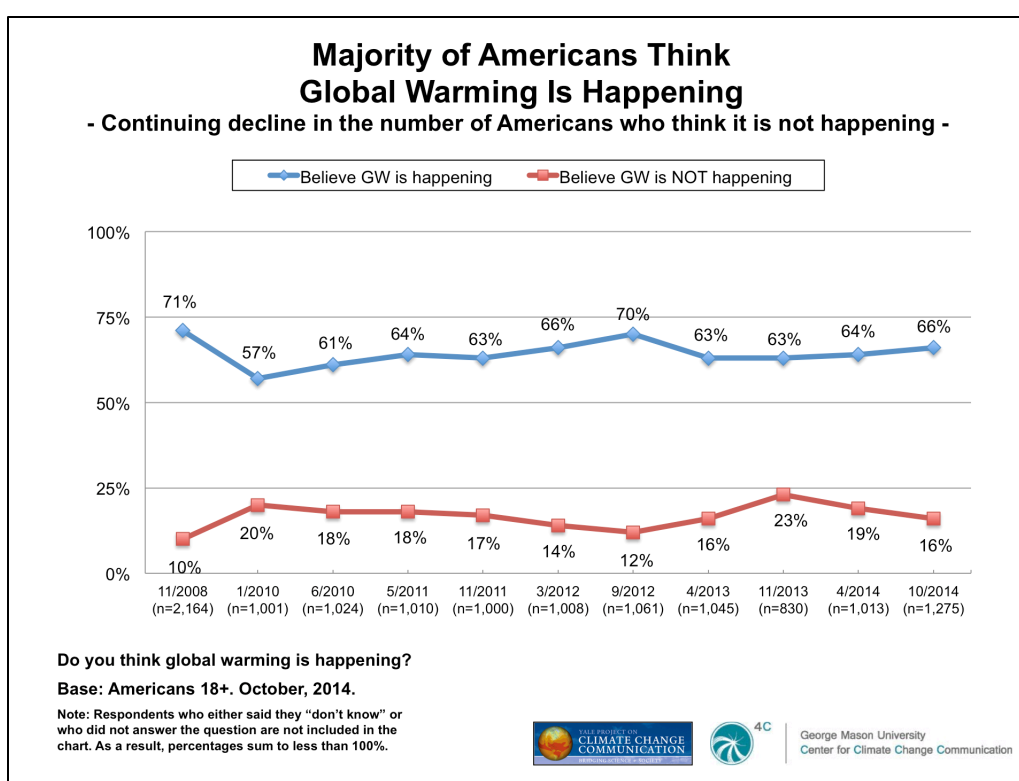
1. Global Warming Beliefs and Attitudes

1.1. A majority of Americans think global warming is happening.

Four times more Americans think global warming is happening than think it is not happening.

Two in three (66%) Americans think global warming is happening, up 3 points since November 2013. By contrast, only about one in six Americans (16%) thinks global warming is not happening, down 7 points since November 2013.

Majorities of Americans across age, sex, and education levels think global warming is happening.

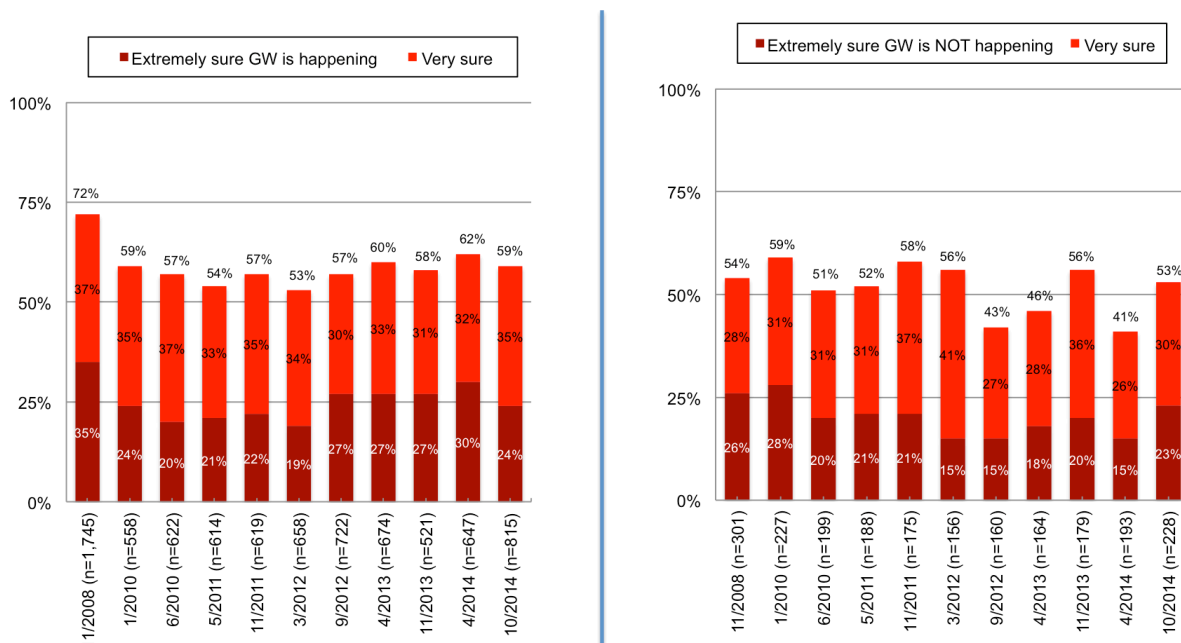


1.2. Trend: Americans who think global warming is not happening may be growing more certain of their beliefs.

While the overall number of Americans who think global warming is *not* happening has decreased in the past year, those that hold this view have become more certain of their beliefs (from 41% in April 2014 to about half – 53% – today). This change was largely driven by those who say they are “extremely sure” global warming is not happening, who rose from 15% in April to 23% in October.

Of those Americans who believe global warming *is* happening, over half are either extremely sure (24%) or very sure (35%) it is.

Trend: Americans Who Think Global Warming Is Not Happening May Be Growing More Certain of Their Beliefs



How sure are you that global warming is/is not happening?

Base: Americans 18+. October, 2014.



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When asked if they need more information to form a firm opinion about global warming, the majority of Americans (70%) say they do, while only three in ten (30%) say they do not need any more information. Specifically, about one in four say they need “a little” more information (23%) or “some” more information (27%), and one in five say they need “a lot” more information (20%).

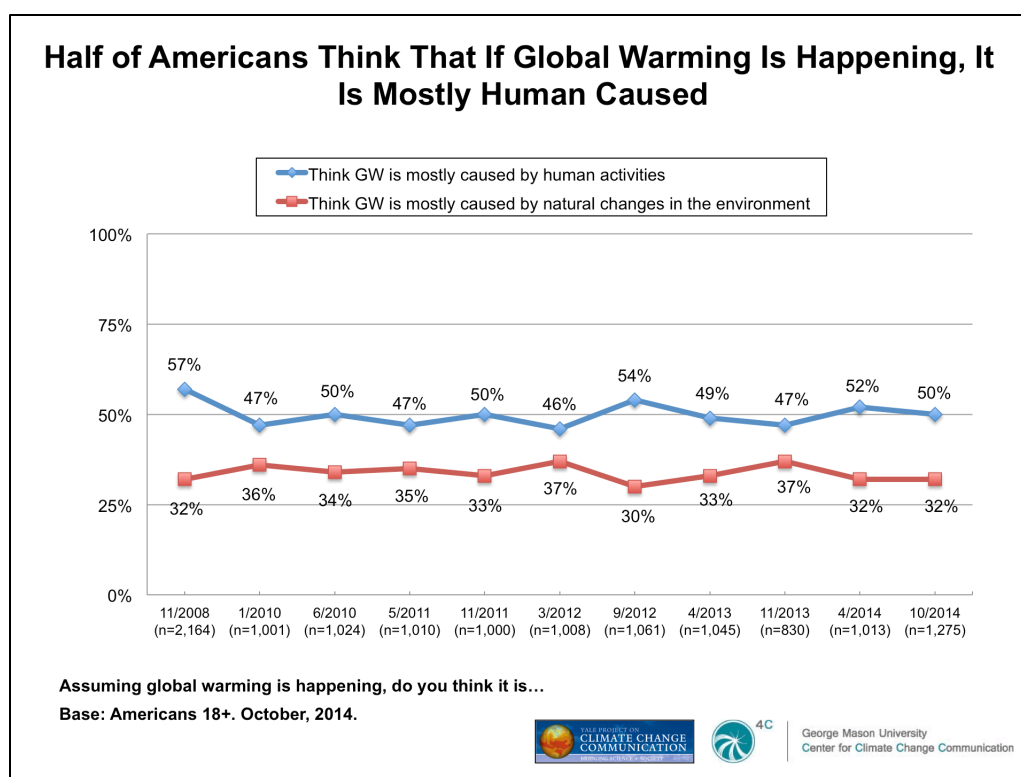
1.3. Half of Americans think that if global warming is happening, it is mostly human caused.

The 2014 U.S. [National Climate Assessment](#) (written and reviewed by hundreds of climate experts over the past 4 years) states: “the global warming of the past 50 years is primarily due to human activities, predominantly the burning of fossil fuels. Many independent lines of evidence confirm that human activities are affecting climate in unprecedented ways” (p. 15).¹

Moreover, in a recent study investigating the degree of scientific consensus on climate change, Cook and colleagues (2013) examined nearly 12,000 peer-reviewed papers in the climate science literature and found that of those papers that stated a position on the reality of human-caused global warming, 97% said it is happening and at least partly human caused.

Public understanding of climate change, however, is starkly different than the expert consensus.

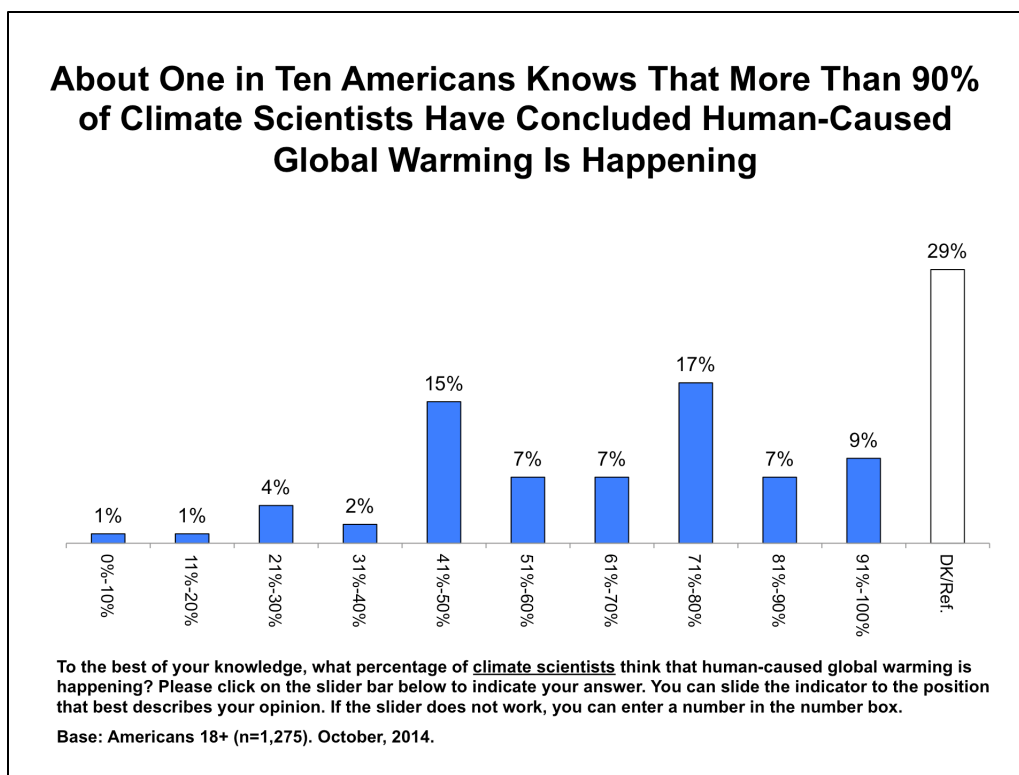
Currently, half of Americans (50%) think that global warming, if it is happening, is mostly human caused, a finding that has held steady since January, 2010. By contrast, one in three (32%) say they believe it is due mostly to natural changes in the environment.



¹ <http://nca2014.globalchange.gov/report>

1.4. About one in ten Americans knows that more than 90% of climate scientists have concluded human-caused global warming is happening.

Very few Americans are aware that 97% percent of climate scientists agree that global warming is human-caused. In fact, only about one in ten Americans thinks that over 90% of climate scientists agree global warming is human caused, and fewer than half (47%) believe a majority do.¹



This public misunderstanding of the scientific consensus – which has been found in each of our surveys since 2008 – has significant consequences. Other research has identified public understanding of the scientific consensus as a critical “gateway belief” that influences other important beliefs (i.e., global warming is happening, human caused, a serious problem, and solvable) and support for action. For further information, see:

Ding, D., Maibach, E. W., Zhao, X., Roser-Renouf, C., & Leiserowitz, A. (2011). Support for climate policy and societal action are linked to perceptions about scientific agreement. *Nature Climate Change*, 1, 462–466, doi:10.1038/nclimate1295

Lewandowsky, S., Gilles, G., & Vaughan, S. (2013). The pivotal role of perceived scientific consensus in acceptance of science, *Nature Climate Change*, 3, 399–404, doi:10.1038/nclimate1729

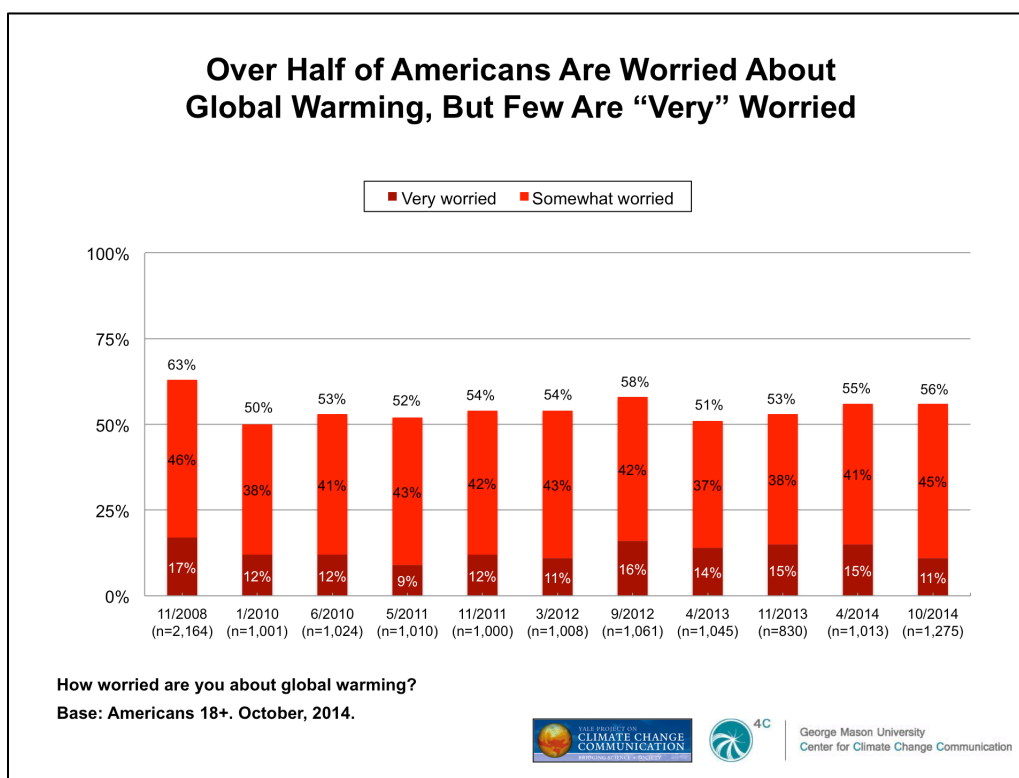
¹ In our survey we asked respondents, who took it on a computer, to estimate the percentage of climate scientists who have concluded that human-caused global warming is happening by moving a simulated “slider bar” which appeared on the screen of their computer. This slider bar allowed respondents to move a marker from one end of the other, where placing the marker all the way to the left recorded a “0%” response, all the way to the right a “100%” response, and any other whole number response at points in between.

McCright, A. M., Dunlap, R. E. & Xiao, C. (2013). Perceived scientific agreement and support for action on climate change in the USA, *Climatic Change*, 119, 511–518, doi:10.1007/s10584-013-0704-9

1.5. Over half of Americans are worried about global warming, but few are “very” worried.

Over half of Americans (56%) say they are at least “somewhat worried” about global warming, but only 11% say they are “very worried” about it.

Even as the impacts of global warming have increased over time, public worry has remained relatively stable, changing little over the past four years. It is lower today than in November 2008.



Likewise, six in ten Americans (58%) say global warming is at least “somewhat” important to them personally, but only one in five (21%) says it is “extremely” or “very” important to them. Four in ten (41%) say the issue is “not too” or “not at all” important to them.

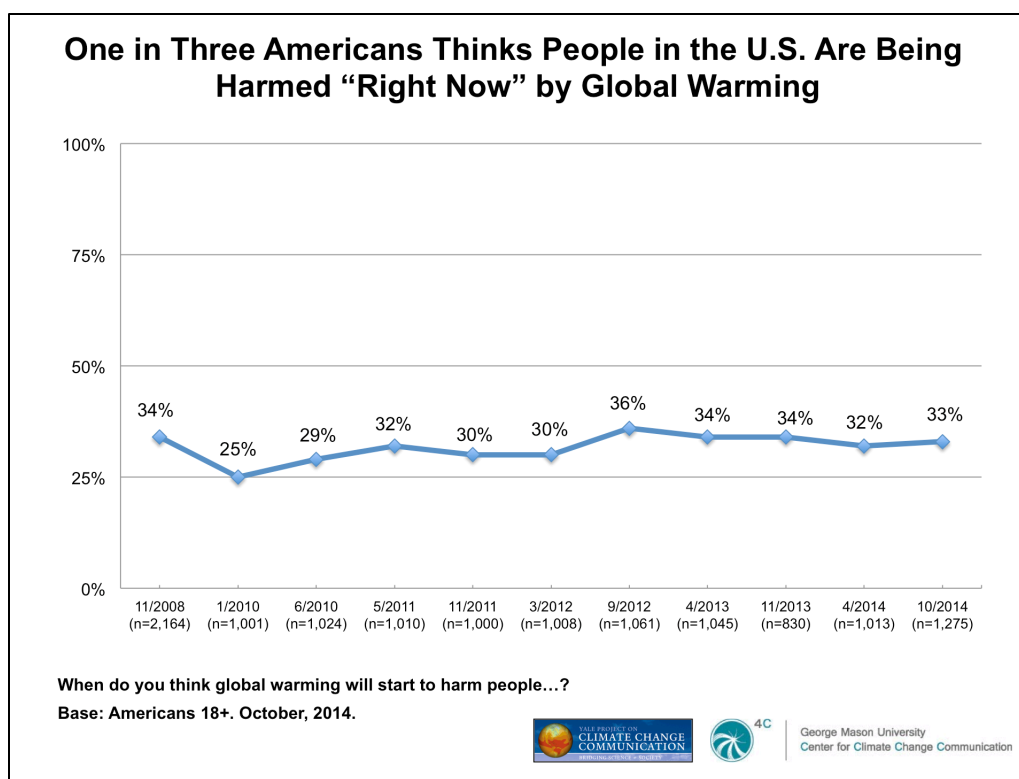
2. Perceived Risk of Global Warming

2.1. One in three Americans thinks people in the U.S. are being harmed right now by global warming.

The impacts of global warming are starting to be felt in the United States. According to the 2014 U.S. National Climate Assessment¹:

“Residents of some coastal cities see their streets flood more regularly during storms and high tides. Inland cities near large rivers also experience more flooding, especially in the Midwest and Northeast. Insurance rates are rising in some vulnerable locations, and insurance is no longer available in others. Hotter and drier weather and earlier snow melt mean that wildfires in the West start earlier in the spring, last later into the fall, and burn more acreage. In Arctic Alaska, the summer sea ice that once protected the coasts has receded, and autumn storms now cause more erosion, threatening many communities with relocation” (p. 1).

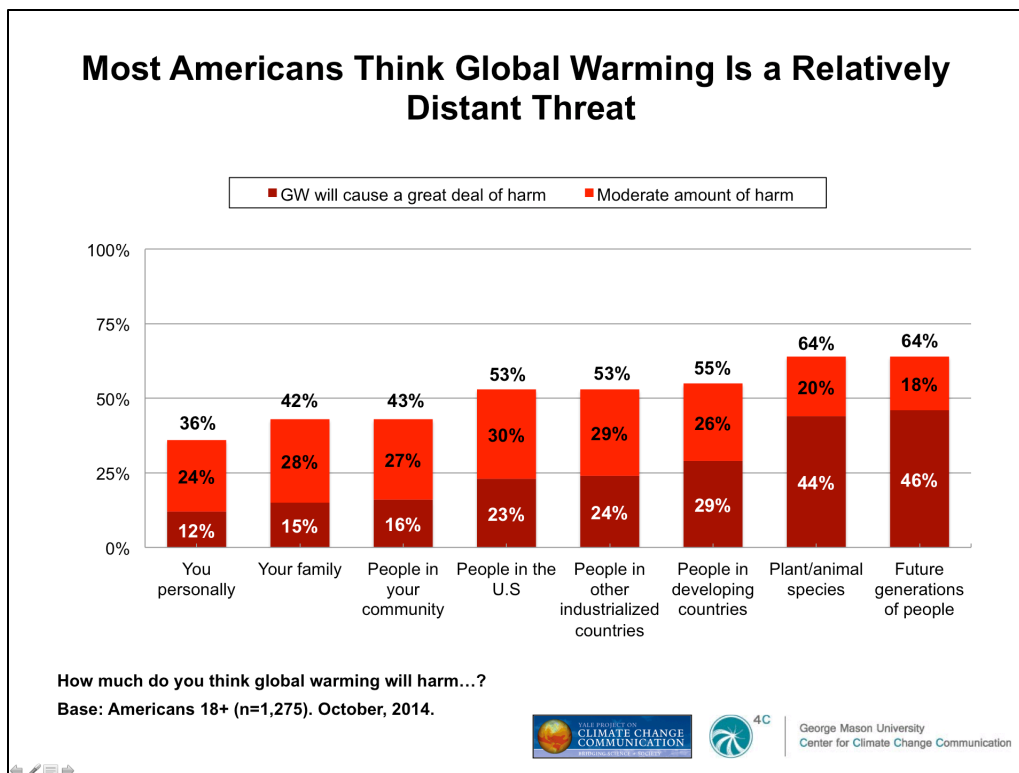
Yet only one in three Americans (33%) thinks people in the U.S. are being harmed “right now” by global warming, a number that has remained steady over the past several years.



¹ <http://nca2014.globalchange.gov/downloads>

2.2. Most Americans think global warming is a relatively distant threat

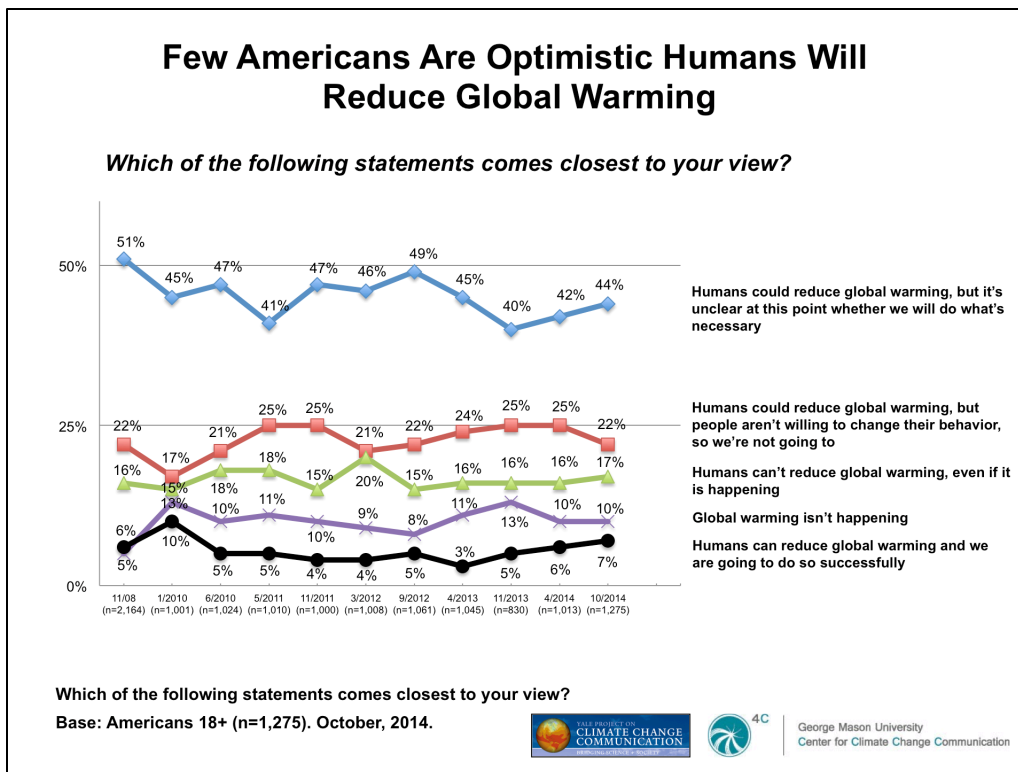
Americans are less likely to think global warming will cause a “great deal” or “moderate amount” of harm to them personally (36%) than to their family (42%), people in their community (43%), people in the U.S. (53%), people in other industrialized countries (53%), people in developing countries (55%), plant or animal species (64%), or future generations of people (64%).



2.3. Few Americans are optimistic humans will reduce global warming.

A plurality of Americans (44%) says humans could reduce global warming, but it's unclear at this point whether we will do what's necessary.

Among the balance of Americans, the pessimists outnumber the optimists. Whereas only 7% say humans can reduce global warming and will do so successfully, about one in five (22%) says we won't because people are unwilling to change their behavior, and nearly one in five (17%) says humans can't reduce global warming even if it is happening.



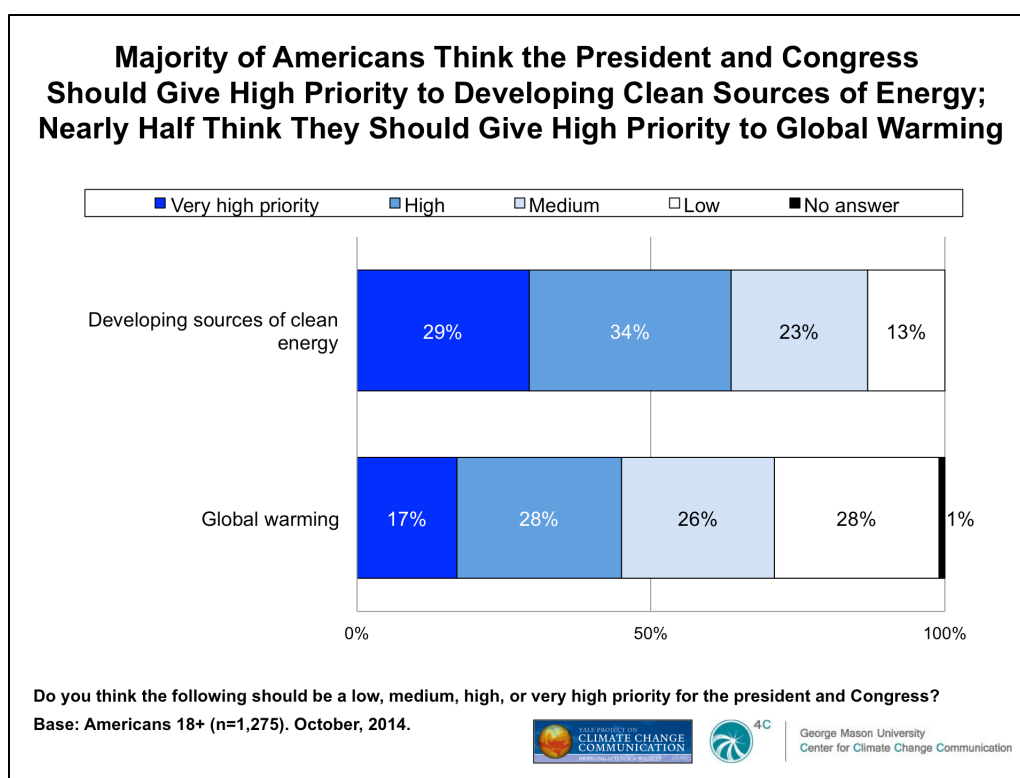
3. The Role for Government in Addressing Global Warming

3.1. A majority of Americans think the president and Congress should give high priority to developing clean sources of energy. Nearly half think they should give high priority to global warming.

A majority of Americans (63%) think the president and Congress should give a very high or high priority to developing clean sources of energy, a critical part of any effort to reduce global warming. Moreover, few (13%) believe they should give it a low priority.

Nearly half (45%) think the president and Congress should give a very high or high priority to global warming. About three in ten (28%), however, think the matter should be given a low priority.

These numbers have held relatively steady for more than a year.



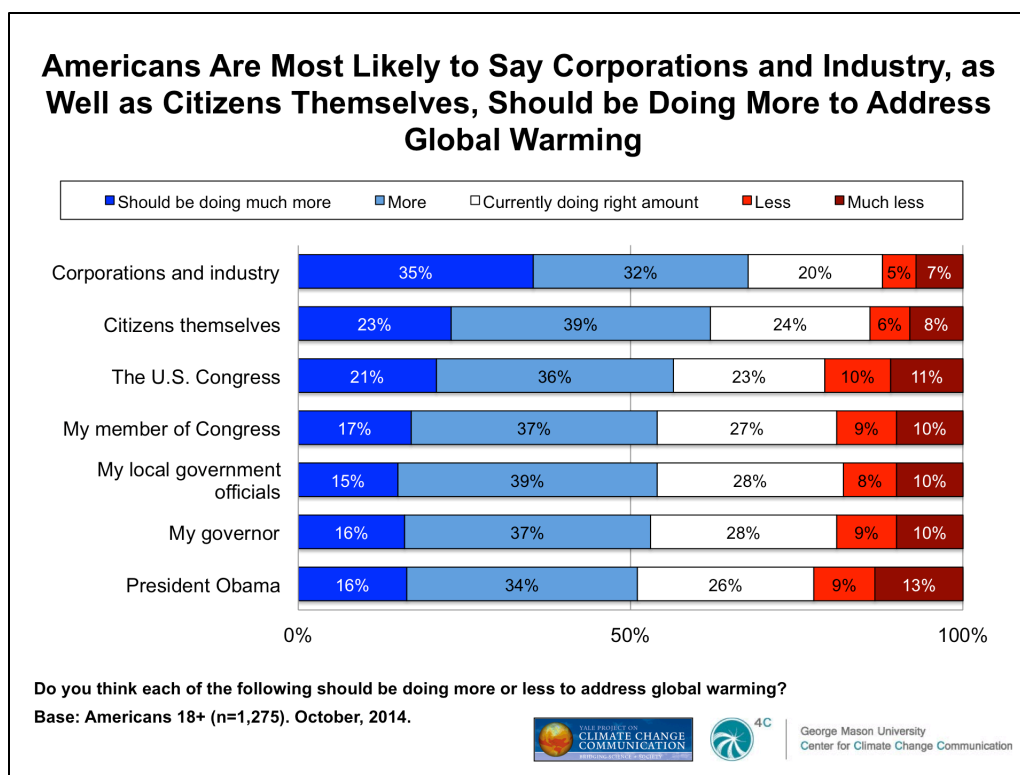
3.2. Americans are most likely to say corporations and industry, as well as citizens themselves, should be doing more to address global warming.

Americans think both the private and public sectors should be doing more to address global warming.

Majorities say corporations and industry (67%) and citizens themselves (63%) should be doing “much more” or “more” to address global warming.

Half or more also believe federal, state, and local government should be doing more:

- The U.S. Congress (57%)
- My member of Congress (54%)
- My local government officials (53%)
- My governor (53%)
- President Obama (51%)



Most Americans (86%) say the U.S. should make an effort to reduce global warming, even if it has economic costs. One in four (27%) supports a large-scale effort even if there are large economic costs. A plurality (39%) favors a medium-scale effort, even if it has moderate economic costs. And one in five (20%) supports a small-scale effort, even if it has small economic costs. Relatively few (14%) say the United States

should make no effort to reduce global warming at all.¹

Nearly six in ten Americans (57%) say the U.S. should reduce its own greenhouse gas emissions, regardless of what other countries do, a number that has remained fairly stable over the past few years.

Relatively few (12%) say the U.S. should reduce its emissions only if other industrialized and/or developing countries do – and only 6 percent of Americans say the U.S. should *not* reduce its greenhouse gas emissions.

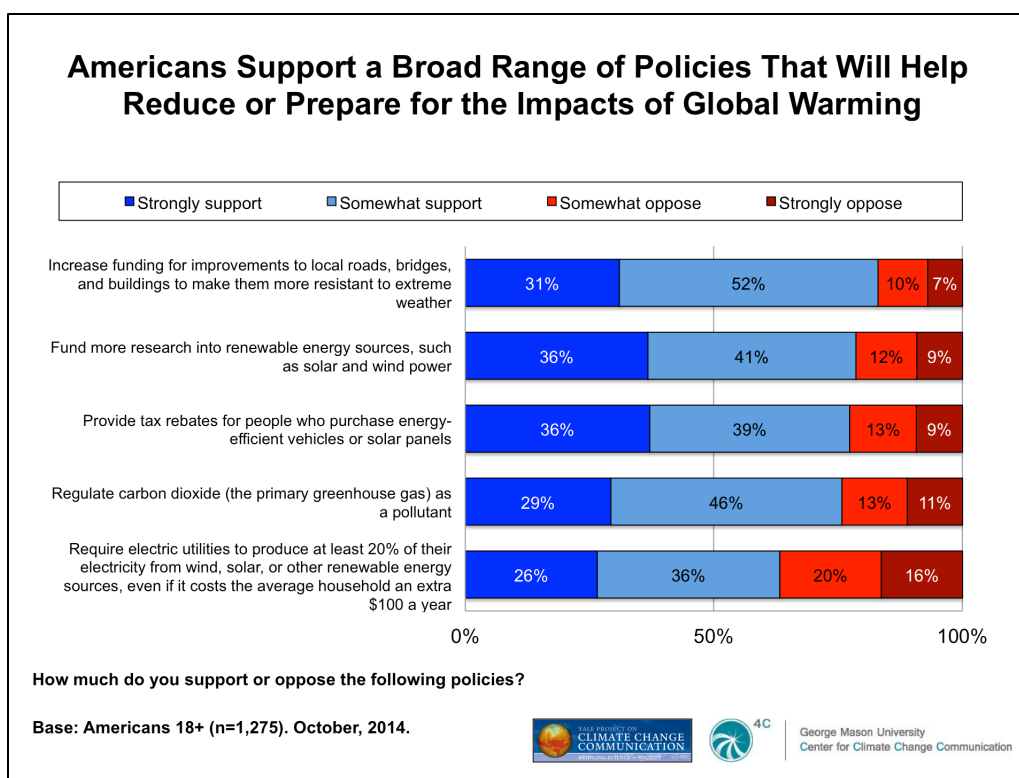
¹ Our previous research found that the average U.S. citizen is willing to pay 13 percent more for their electricity in support of a national clean energy standard. (see Aldy, J., Kotchen, M., & Leiserowitz, A. (2012). Willingness to pay and political support for a U.S. national clean energy standard. *Nature Climate Change*, 2, 596–599. doi:10.1038/nclimate1527).

4. Support for Policies to Reduce or Protect Against Global Warming

4.1. Americans support a broad range of policies that will help reduce or prepare for the impacts of global warming

Solid majorities of Americans “strongly” or “somewhat” support the following:

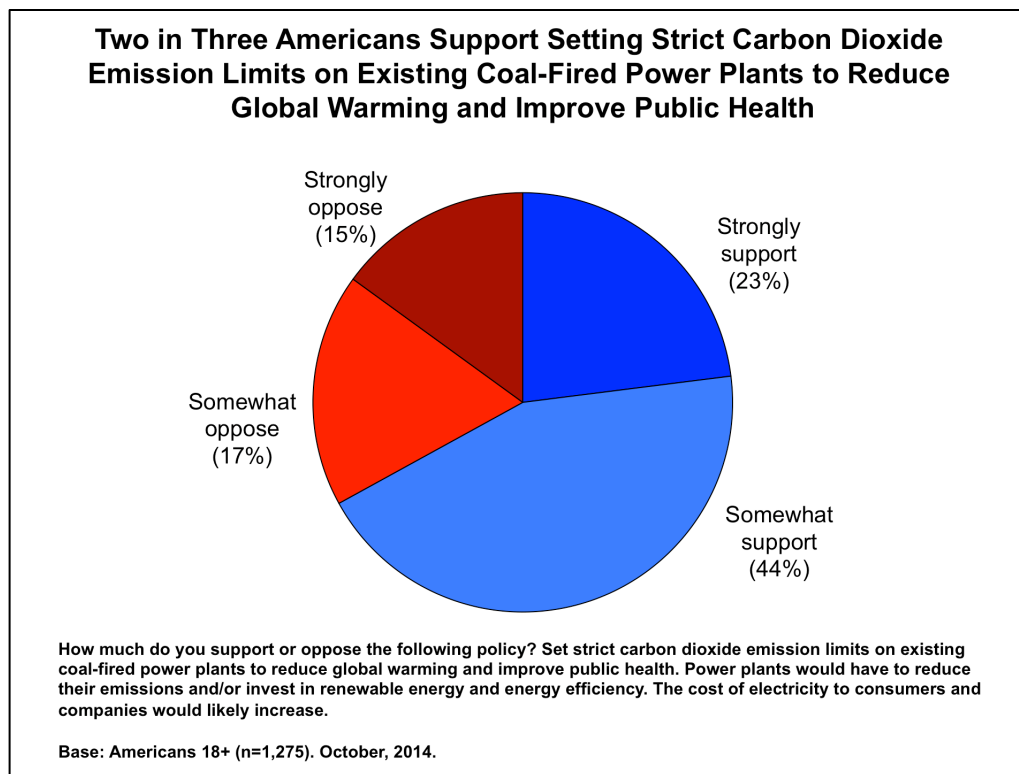
- Increased funding for improvements to local roads, bridges, and buildings to make them more resistant to extreme weather (83%)
- Funding more research into renewable energy sources such as solar and wind power (77%)
- Providing tax rebates to people who purchase energy-efficient vehicles or solar panels (75%)
- Regulating carbon dioxide as a pollutant (75%)
- Requiring electric utilities to produce at least 20% of their electricity from wind, solar, or other renewable energy sources, even if it costs the average household an extra \$100 a year (62%)



4.2. Two in three Americans support setting strict carbon dioxide emission limits on existing coal-fired plants to reduce global warming and improve public health.

Americans by a two-to-one margin support (67%) rather than oppose (32%) the following policy:

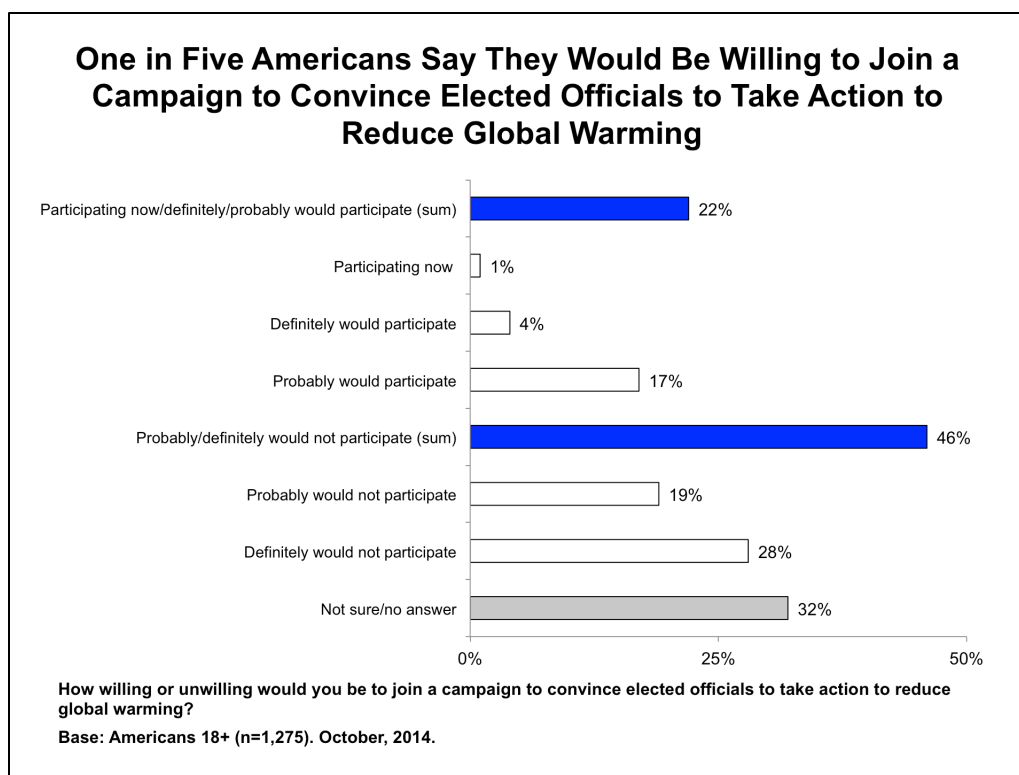
“Set[ting] strict carbon dioxide emission limits on existing coal-fired power plants to reduce global warming and improve public health. Power plants would have to reduce their emissions and/or invest in renewable energy and energy efficiency. The cost of electricity to consumers and companies would likely increase.”



4.3. One in five Americans say they would be willing to join a campaign to convince elected officials to take action to reduce global warming.

Americans not only support policies to reduce global warming, but about one in five (22%) are currently part of – or would “definitely” or “probably” be willing to join – a campaign to convince elected officials to take action to reduce global warming.

Nearly half (46%) probably or definitely would *not* be willing to join such a campaign.



Appendix I: Data Tables of Questions Cited in the Report

(Base: Americans 18+)

Recently, you may have noticed that *global warming* has been getting some attention in the news. Global warming refers to the idea that the world's average temperature has been increasing over the past 150 years, may be increasing more in the future, and that the world's climate may change as a result.

What do you think: Do you think that global warming is happening?

	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%
Yes	66	64	63	63	70	66	63	64	61	57	71
No	16	19	23	16	12	14	17	18	18	20	10
Don't know	18	17	14	20	18	20	20	18	21	23	19

(Base: Americans 18+ who say global warming is happening)

How sure are you that global warming is happening?

	Oct 2014	April 2014	Nov 2013	Sept 2012	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(815)	(649)	(521)	(674)	(722)	(658)	(619)	(614)	(622)	(558)	(1,745)
	%	%	%	%	%	%	%	%	%	%	%
Extremely sure	24	30	27	27	27	19	22	21	20	24	35
Very sure	35	32	31	33	30	34	35	33	37	35	37
Somewhat sure	38	33	39	37	40	42	39	40	40	37	24
Not at all sure	4	5	3	4	3	5	5	6	3	5	4

(Base: Americans 18+ who say global warming is not happening)
How sure are you that global warming is not happening?

	Oct 2014	April 2014	Nov 2013	Sept 2012	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(228)	(196)	(179)	(164)	(160)	(156)	(175)	(188)	(199)	(227)	(301)
	%	%	%	%	%	%	%	%	%	%	%
Extremely sure	23	15	20	18	15	15	21	21	20	28	26
Very sure	30	26	36	28	27	41	37	31	31	31	28
Somewhat sure	35	47	36	42	45	35	37	38	44	34	38
Not at all sure	11	12	9	12	13	8	5	11	4	7	8

(Base: Americans 18+)
Assuming global warming is happening, do you think it is...

	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%
Caused mostly by human activities	50	52	47	49	54	46	50	47	50	47	57
Caused mostly by natural changes in the environment	32	32	37	33	30	37	33	35	34	36	32
None of the above because global warming isn't happening	9	8	8	8	7	5	8	8	6	9	4
Other	9	8	8	11	8	11	8	9	8	7	6

(Base: Americans 18+)**Which comes closest to your own view?**

	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%
Most scientists think global warming is happening	44	40	42	42	44	35	41	39	34	34	47
Most scientists think global warming is not happening	3	5	6	4	3	3	3	4	4	5	3
There is a lot of disagreement among scientists about whether or not global warming is happening	31	32	33	33	36	41	39	40	45	40	33
Don't know enough to say	22	23	18	20	18	21	18	18	17	22	18

(Base: Americans 18+)

To the best of your knowledge, what percentage of climate scientists think that human-caused global warming is happening? Please click on the slider bar below to indicate your answer. You can slide the indicator to the position that best describes your opinion. If the indicator does not work, you can enter a number in the number box.

	Oct 2014
	(1,275)
	%
Of those who provided a rating:	
Mean	65
Median	67
Percent who did not provide a rating (Don't know/Refused)	30

(Base: Americans 18+)**How worried are you about global warming?**

	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%
Very worried	11	14	15	14	16	11	12	9	12	12	17
Somewhat worried	45	41	38	37	42	43	42	43	41	38	46
Not very worried	26	27	26	30	25	30	31	28	30	27	24
Not at all worried	18	18	20	19	17	16	15	20	18	23	13

(Base: Americans 18+)**How important is the issue of global warming to you personally?**

	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%
Extremely important	5	8	8	8	6	6	6	7	6	5	11
Very important	16	17	14	13	17	14	13	15	18	15	21
Somewhat important	37	38	33	36	36	41	41	38	39	38	40
Not too important	24	21	26	24	24	23	25	25	24	23	18
Not at all important	18	16	19	18	17	16	15	14	14	20	11

(Base: Americans 18+)**How much do you think global warming will harm...?****You personally**

	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%
A great deal	12	13	13	15	16	11	9	11	10	14	10
A moderate amount	24	25	25	25	26	18	21	18	21	23	22
Only a little	26	26	27	26	25	30	28	28	27	22	24
Not at all	27	25	26	23	20	29	25	25	24	31	22
Don't know	11	11	8	11	13	11	17	18	18	11	23

Your family

	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%
A great deal	15	16	17	17	18	12	10	13	11	15	11
A moderate amount	28	27	25	27	28	21	24	21	25	25	24
Only a little	23	24	25	23	23	29	27	26	24	21	23
Not at all	23	21	24	20	17	26	21	23	21	28	19
Don't know	11	11	9	12	14	12	18	18	19	11	23

(Base: Americans 18+)**How much do you think global warming will harm...? (Cont'd.)****People in your community**

	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%
A great deal	16	17	14	17	19	12	11	12	11	15	13
A moderate amount	27	28	29	28	29	22	24	33	25	27	26
Only a little	23	24	24	23	23	29	27	26	24	22	20
Not at all	22	20	23	18	15	24	21	22	21	24	17
Don't know	11	11	10	13	13	13	18	18	19	12	23

People in the United States

	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%
A great deal	23	23	23	22	26	18	15	16	16	22	21
A moderate amount	30	30	30	30	31	28	29	26	28	29	28
Only a little	20	18	19	19	17	24	23	23	22	16	15
Not at all	17	18	20	16	12	18	17	17	17	22	14
Don't know	11	11	8	12	13	12	16	18	18	12	22

(Base: Americans 18+)**How much do you think global warming will harm...? (Cont'd.)****People in other modern industrialized countries**

	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%
A great deal	24	22	25	21	26	20	17	17	17	23	22
A moderate amount	29	31	29	32	31	29	29	25	28	29	28
Only a little	18	19	19	18	18	21	22	23	21	16	13
Not at all	17	16	19	15	11	17	15	17	15	19	13
Don't know	11	12	9	13	15	13	17	19	18	13	24

People developing countries

	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%
A great deal	29	31	32	30	35	26	22	23	22	29	31
A moderate amount	26	24	24	25	29	26	28	22	28	25	22
Only a little	16	17	17	18	10	19	17	20	17	14	11
Not at all	17	16	19	13	11	16	15	17	15	19	13
Don't know	12	12	9	13	15	14	18	19	18	13	24

(Base: Americans 18+)**How much do you think global warming will harm...? (Cont'd.)****Future generations of people**

	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%
A great deal	46	49	46	42	47	43	40	37	39	42	44
A moderate amount	18	18	19	21	21	22	22	22	22	22	17
Only a little	11	10	11	12	9	12	13	10	11	9	7
Not at all	13	12	15	12	8	11	10	12	12	15	10
Don't know	13	11	9	12	14	13	16	19	16	12	22

Plant and animal species

	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%
A great deal	44	47	46	39	43	43	41	39	40	43	45
A moderate amount	20	19	19	24	25	21	19	19	21	19	17
Only a little	10	12	11	13	11	13	16	12	12	11	8
Not at all	13	12	15	13	8	10	10	13	13	15	9
Don't know	12	11	8	10	13	12	15	18	15	12	20

(Base: Americans 18+)**When do you think global warming will start to harm people in the United States?**

	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%
They are being harmed right now	33	32	34	34	36	30	30	32	29	25	34
In 10 years	10	9	10	11	13	12	10	12	12	12	13
In 25 years	14	14	14	12	11	14	13	13	12	14	13
In 50 years	12	15	11	12	12	14	15	12	13	13	13
In 100 years	13	14	12	13	13	15	15	11	15	13	12
Never	18	16	18	17	15	16	16	20	19	23	15

(Base: Americans 18+)**On some issues, people feel that they have all the information they need in order to form a firm opinion, while on other issues they would like more information before making up their mind. For global warming, where would you place yourself?**

	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%
I need a lot more information	20	19	18	17	20	19	18	22	20	22	30
I need some more information	27	25	22	23	25	28	28	30	27	23	30
I need a little more information	23	25	26	25	25	23	27	25	29	26	22
I do not need any more information	30	31	33	34	30	30	27	23	24	29	18

(Base: Americans 18+)**Which of the following statements comes closest to your view?**

	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%
Humans can reduce global warming, and we are going to do so successfully	7	6	5	3	5	4	4	5	5	10	6
Humans could reduce global warming, but it's unclear at this point whether we will do what's needed	44	42	40	45	49	46	47	41	47	45	51
Humans could reduce global warming, but people aren't willing to change their behavior, so we're not going to	22	25	25	24	22	21	25	25	21	17	22
Humans can't reduce global warming, even if it is happening	17	16	16	16	15	20	15	18	18	15	16
Global warming isn't happening	10	10	13	11	8	9	10	11	10	13	5

(Base: Americans 18+)**Do you think...? (n=1,275)**

	Very high	High	Medium	Low
	%	%	%	%
Global warming should be a low, medium, high, or very high priority for the president and Congress?	17	28	26	28
Developing sources of clean energy should be a low, medium, high, or very high priority for the president and Congress?	29	34	23	13

(Base: Americans 18+)**Do you think each of the following should be doing more or less to address global warming?****The U.S. Congress**

	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%
Much more	21	25	26	25	24	23	20	19	19	19	26
More	36	31	26	32	36	35	35	38	35	35	41
Currently doing the right amount	23	24	26	20	22	21	25	20	26	23	20
Less	10	8	9	11	8	12	11	11	10	10	6
Much less	11	10	13	10	9	9	8	12	9	15	7

President Obama

	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%
Much more	16	18	18	18	18	19	19	19	20	17	28
More	34	31	28	34	35	35	33	35	32	33	38
Currently doing the right amount	26	29	31	24	29	25	28	22	30	26	21
Less	9	7	7	12	7	10	10	10	9	9	6
Much less	13	13	14	12	10	11	11	14	10	15	7

+President George W. Bush

(Base: Americans 18+)**Do you think each of the following should be doing more or less to address global warming? (Cont'd.)****Corporations and industry**

	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%
Much more	35	36	40	39	39	40	37	34	38	33	41
More	32	30	25	31	32	30	30	31	28	31	32
Currently doing the right amount	20	20	20	18	18	18	20	18	22	21	17
Less	5	6	5	5	6	7	6	8	7	7	5
Much less	7	7	8	5	5	5	6	9	6	9	6

Citizens themselves

	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%
Much more	23	23	27	24	25	27	26	28	31	27	30
More	39	42	34	39	41	40	39	35	33	36	42
Currently doing the right amount	23	22	23	25	23	22	24	21	24	23	20
Less	6	6	6	6	5	7	6	9	7	7	5
Much less	8	6	8	5	4	5	6	7	5	8	5

(Base: Americans 18+)**Do you think each of the following should be doing more or less to address global warming? (Cont'd.)****Your local government officials**

	Oct 2014
(Unweighted base)	(1,275)
	%
Much more	15
More	39
Currently doing the right amount	28
Less	8
Much less	10

Your governor

	Oct 2014
(Unweighted base)	(1,275)
	%
Much more	16
More	37
Currently doing the right amount	28
Less	9
Much less	10

(Base: Americans 18+)**Do you think each of the following should be doing more or less to address global warming? (Cont'd.)****Your member of Congress**

	Oct 2014
(Unweighted base)	(1,275)
	%
Much more	17
More	37
Currently doing the right amount	27
Less	9
Much less	10

People disagree whether the United States should reduce greenhouse gas emissions on its own, or make reductions only if other countries do so. Which of the following statements comes closest to your own point of view? The United States should reduce its greenhouse gas emissions...

	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%
Regardless of what other countries do	57	58	60	59	61	63	60	61	65	57	67
Only if other industrialized countries (such as England, Germany, and Japan) reduce their emissions	3	3	4	3	2	3	3	3	3	3	2
Only if other industrialized countries and developing countries (such as China, India, and Brazil) reduce their emissions	9	9	8	7	7	8	7	8	8	7	7
The U.S. should not reduce its emissions	6	6	6	6	6	5	5	6	5	7	4
Don't know/Refused	24	23	22	25	25	21	25	23	19	25	20

(Base: Americans 18+)**How big of an effort should the United States make to reduce global warming?**

	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%
A large-scale effort, even if it has large economic costs	27	28	27	26	24	26	26	29	28	26	34
A medium-scale effort, even if it has moderate economic costs	39	35	34	36	44	42	40	38	41	36	40
A small-scale effort, even if it has small economic costs	20	21	22	22	19	19	23	19	18	21	17
No effort	14	16	17	14	12	13	12	14	13	18	9

(Base: Americans 18+)**How much do you support or oppose the following policies?****Fund more research into renewable energy sources, such as solar and wind power**

	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%
Strongly support	36	31	30	28	30	36	36	47	42	41	53
Somewhat support	41	44	42	42	43	43	42	37	45	44	39
Somewhat oppose	12	12	16	14	13	12	17	11	10	11	6
Strongly oppose	9	9	9	11	8	9	6	6	3	4	2

(Base: Americans 18+)**How much do you support or oppose the following policies? (Cont'd.)****Provide tax rebates for people who purchase energy-efficient vehicles or solar panels**

	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%
Strongly support	36	29	28	26	29	30	30	41	41	32	38
Somewhat support	41	46	43	45	44	46	48	41	42	50	47
Somewhat oppose	13	11	17	15	14	13	14	10	12	10	11
Strongly oppose	9	11	9	8	7	11	7	9	5	7	4

Regulate carbon dioxide (the primary greenhouse gas) as a pollutant

	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012	March 2012	Nov 2011	May 2011	June 2010	Jan 2010	Nov 2008
(Unweighted base)	(1,275)	(1,013)	(830)	(1,045)	(1,061)	(1,008)	(1,000)	(1,010)	(1,024)	(1,001)	(2,164)
	%	%	%	%	%	%	%	%	%	%	%
Strongly support	29	23	24	23	21	25	25	NA	26	24	30
Somewhat support	46	45	43	45	45	50	48	NA	51	47	50
Somewhat oppose	13	17	17	16	18	15	20	NA	13	14	13
Strongly oppose	11	11	12	11	10	11	7	NA	11	15	7

(Base: Americans 18+)**How much do you support or oppose the following policies? (Cont'd.)****Require electric utilities to produce at least 20% of their electricity from wind, solar, or other renewable energy sources, even if it costs the average household an extra \$100 a year**

	Oct 2014	April 2014	Nov 2013	April 2013	Sept 2012
(Unweighted base)	(1,275)	(1,013)	(830)	(1,045)	(1,061)
	%	%	%	%	%
Strongly support	26	18	24	21	22
Somewhat support	36	37	35	38	37
Somewhat oppose	20	23	28	28	27
Strongly oppose	16	19	10	9	7

Increase funding for improvements to local roads, bridges, and buildings to make them more resistant to extreme weather

	Oct 2014
(Unweighted base)	(1,275)
	%
Strongly support	31
Somewhat support	52
Somewhat oppose	10
Strongly oppose	7

(Base: Americans 18+)**How much do you support or oppose the following policy?**

Set strict carbon dioxide emission limits on existing coal-fired power plants to reduce global warming and improve public health. Power plants would have to reduce their emissions and/or invest in renewable energy and energy efficiency. The cost of electricity to consumers and companies would likely increase.

	Oct 2014
(Unweighted base)	(1,275)
	%
Strongly support	23
Somewhat support	44
Somewhat oppose	17
Strongly oppose	15

How willing or unwilling would you be to join a campaign to convince elected officials to take action to reduce global warming?

	Oct 2014
	(1,275)
	%
I am participating in a campaign like this now	1
I definitely would do it	4
I probably would do it	17
I probably would <u>not</u> do it	19
I definitely would <u>not</u> do it	28
Not sure	23
Refused/Prefer not to answer	9

Appendix II: Survey Method

The data in this report are based on a nationally representative survey of 1,275 American adults, aged 18 and older, conducted from October 17-28, 2014. All questionnaires were self-administered by respondents in a web-based environment. The survey took, on average, about 29 minutes to complete.

The sample was drawn from GfK's KnowledgePanel®, an online panel of members drawn using probability sampling methods. Prospective members are recruited using a combination of random digit dial and address-based sampling techniques that cover virtually all (non-institutional) resident phone numbers and addresses in the United States. Those contacted who would choose to join the panel but do not have access to the Internet are loaned computers and given Internet access so they may participate.

The sample therefore includes a representative cross-section of American adults – irrespective of whether they have Internet access, use only a cell phone, etc. Key demographic variables were weighted, post survey, to match US Census Bureau norms.

The survey instrument was designed by Anthony Leiserowitz, Geoff Feinberg, Seth Rosenthal, and Jenn Marlon of Yale University, and Edward Maibach and Connie Roser-Renouf of George Mason University.

Margins of error

All samples are subject to some degree of sampling error—that is, statistical results obtained from a sample can be expected to differ somewhat from results that would be obtained if every member of the target population was interviewed. Average margins of error, at the 95% confidence level, are as follows:

- October 2014: Fielded October 17-28 with 1,275 American adults. The margin of sampling error is plus or minus 3 percentage points.
- April 2014: Fielded April 21 – 24 with 1,013 American adults. The margin of sampling error is plus or minus 3 percentage points.
- November 2013: Fielded November 23 through December 9 with 830 American adults. The margin of sampling error is plus or minus 3 percentage points.
- April 2013: Fielded April 8-15 with 1,045 American adults. The margin of sampling error is plus or minus 3 percentage points.
- September 2012: Fielded August 31 through September 12, 2012 with 1,061 American adults. The margin of sampling error is plus or minus 3 percentage points.
- March 2012: Fielded March 12 through March 30, 2012 with 1,008 American adults. The margin of sampling error is plus or minus 3 points.
- November 2011: Fielded October 20 through November 16 with 1,000 American adults. The margin of sampling error is plus or minus 3 points.
- May 2011: Fielded April 23 through May 12 with 1,010 American adults. The margin of sampling error is plus or minus 3 points.
- June 2010: Fielded May 14 through June 1 with 1,024 American adults. The margin of sampling error is plus or minus 3 points.
- January 2010: Fielded December 24, 2009 through January 3, 2010 with 1,001 American adults. The margin of sampling error is plus or minus 3 points.
- November 2008: Fielded October 7 through November 12 with 2,164 American adults. Data were

collected in two waves: wave 1 from October 7 through October 20 and wave 2 from October 24 through November 12. The margin of sampling error is plus or minus 2 points.

Rounding error

For tabulation purposes, percentage points are rounded off to the nearest whole number. As a result, percentages in a given chart may total slightly higher or lower than 100%.

Appendix III: Sample Demographics

	N (unweighted) 1,275	% (weighted) 100
Total		
Sex		
Men	629	48
Women	646	52
Age		
Millennials (18-30)	208	23
Generation X (31-48)	338	29
Baby Boomers (49-67)	529	35
WWII (68+)	200	13
Education		
Less than high school	78	12
High school graduate	388	30
Some college/tech	359	29
College graduate	252	17
Post graduate	198	13
Household Income		
<\$25K	237	18
\$25K - <\$50K	274	23
\$50K - <\$75K	237	18
\$75K - <\$100K	182	15
\$100K - <\$125K	168	13
\$125K+	177	13
Hispanic		
Yes	108	15
Race/Ethnicity		
White, non-Hispanic	999	66
Black, African-American non-Hispanic	96	12
Other non-Hispanic	72	8
Region		
Northeast	242	18
Midwest	314	21
South	442	37
West	277	23

