

Acceptance of Global Warming Among Americans Reaches Highest Level Since 2008

a report from the National Surveys on Energy and Environment

Introduction

For the first time since 2008 at least 7 out of 10 Americans indicate that they believe there is solid evidence of global warming over the past four decades. This 70% belief level is the second highest mark in the history of the National Surveys on Energy and the Environment (NSEE) falling just short of the 72% record level reported in Fall 2008. This increased level of acceptance of evidence of global warming coincides with the lowest percentage of Americans expressing doubt in solid evidence of global warming in the history of the NSEE. The Fall 2015 survey shows that only 16% of adult Americans currently believe there is not solid evidence of global warming, a mark 1% lower than the previous record of 17% recorded in Fall 2008.

Key Findings:

1. More Americans than at any time since 2008 indicate that there is solid evidence of increasing temperatures on Earth with 70% of residents now maintaining that view. Similarly, a record low number of Americans (16%) say that there is not evidence of global warming.
2. A majority of Republicans (56%) now believe that there is solid evidence of global warming, up from 47% a year ago, joining solid majorities of Democrats (79%) and Independents (69%).
3. Americans who believe there is evidence of global warming are also increasingly confident in their belief, with a record 65% saying they are “very confident” in their appraisal.
4. Severe drought across many parts of the United States has become the factor most cited by Americans as having a “very large” effect on their position that global warming is occurring. A record 61% of Americans who indicate there is evidence of global warming said severe droughts were having a very large effect on their belief.
5. In previous NSEE surveys, large majorities of American who do *not* believe there is evidence of global warming have pointed to local weather observations as the basis for their position. In the Fall 2015 survey, however, more than a third (34%) of those doubtful of global warming said local weather observation has “no effect” on their views about climate change, the highest percentage in the history of the NSEE.

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American Views on The Existence of Global Warming

For the first time since Fall 2008 at least 7 out of 10 Americans indicate that there is solid evidence of global warming. That 70% mark is just 2 points short of the NSEE record of 72% recorded eight years ago, and is up seven percentage points from April 2015 and up 10 percentage points from this time last Fall (see *Table 1*). The latest NSEE survey also finds a record low percentage of Americans claiming that there is not solid evidence of global warming. Only 16% of Americans stated that there is not solid evidence of warming on the planet over the last four decades, 1% lower than the previous low level of 17% found during the first NSEE survey in Fall 2008.

Table 1
American views on the existence of evidence of global warming
2008-2015

	Fall 2008	Fall 2009	Spring 2010	Fall 2010	Spring 2011	Fall 2011	Spring 2012	Fall 2012	Spring 2013	Fall 2013	Spring 2014	Fall 2014	Spring 2015	Fall 2015
Yes	72%	65%	52%	58%	55%	62%	65%	68%	63%	61%	55%	60%	63%	70%
No	17%	20%	36%	26%	32%	26%	24%	21%	22%	25%	33%	24%	24%	16%
Not Sure	11%	15%	13%	16%	12%	12%	11%	11%	15%	13%	12%	17%	13%	15%

Question: "From what you've read and heard. Is there solid evidence that the average temperature on earth has been getting warmer over the past four decades?"

There are some significant shifts across various demographic groups on the existence of global warming, including political party affiliation where Republicans have consistently demonstrated more doubt than Democrats or Independents. In Fall 2015, however, doubt about the existence of global warming decreased more among individuals describing themselves as Republicans than among self-described Democrats or Independents. Over the last year the percentage of Republicans that stated there is not evidence of global warming decreased by 15 points from 41% to 26%. Comparatively, only 6% fewer Democrats and 4% fewer Independents stated that there was not solid evidence of global warming (see *Table 2*). The relatively lower drop in levels of doubt about global warming among Democrats and Independents may be in part due to their comparatively low levels of doubt. Nonetheless, the far more substantial decline in doubt among Republicans contributed significantly to the record low levels of doubt about global warming reported in the Fall 2015 NSEE. Further, this suggests some possibility for greater convergence of views across partisan lines, although since it reflects only a single point in time, tracking this in future waves of the NSEE will determine whether there is truly a trend of convergence.



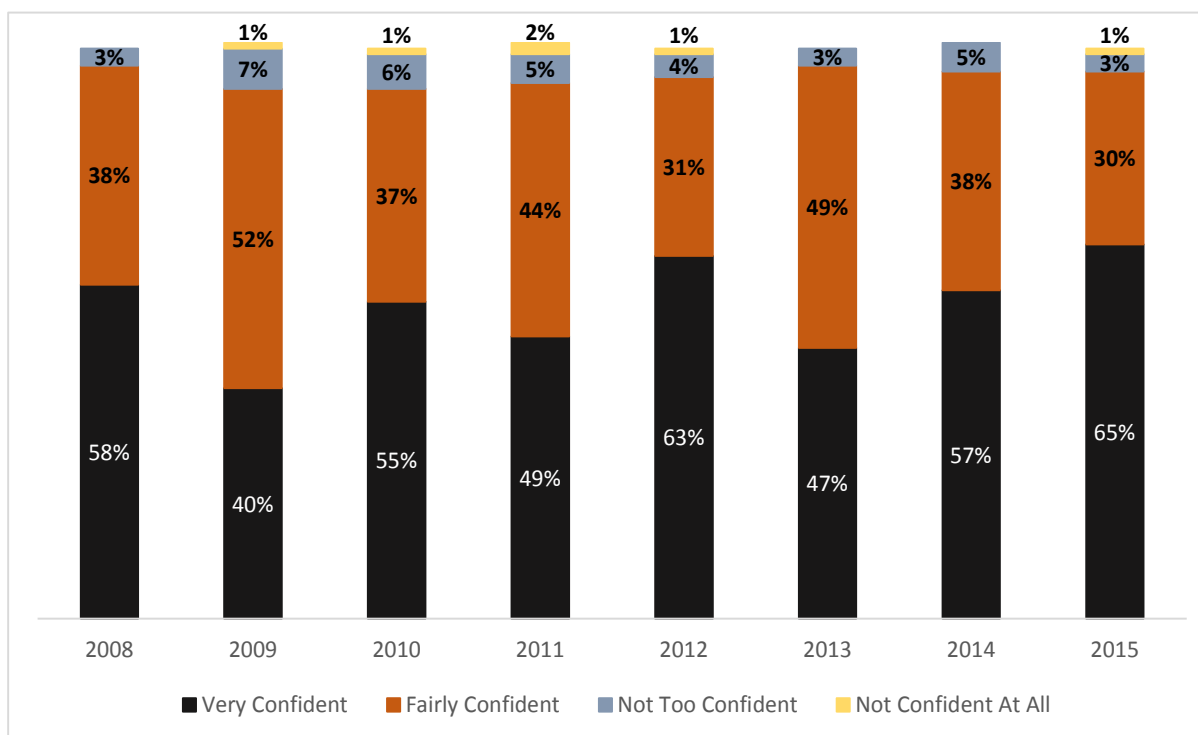
Table 2
American views on the existence of evidence of global warming, by party affiliation

	There is Evidence of Global Warming		There is Not Evidence of Global Warming		Unsure if There is Evidence of Global Warming	
	Fall 2014	Fall 2015	Fall 2014	Fall 2015	Fall 2014	Fall 2015
Democrat	71%	79%	15%	9%	14%	13%
Republican	47%	56%	41%	26%	12%	18%
Independent	57%	69%	21%	17%	22%	15%

Question: "From what you've read and heard. Is there solid evidence that the average temperature on earth has been getting warmer over the past four decades?"

The increased public acceptance of global warming has also been accompanied by record levels of confidence in these views. In Fall 2015, nearly two-thirds (65%) of Americans who think that there is solid evidence of global warming are very confident in their belief. The previous high mark for confidence in evidence of global warming came in Fall 2012 when 63% of those with such views were very confident in their evaluation.

Figure 1
Levels of confidence about global warming's existence, among americans who think global warming is occurring



Question: "How confident are you that the average temperature on earth is increasing? Are you very confident, fairly confident, not too confident or not confident at all that the average temperature on earth is increasing?"

Drought Continues to Increase as a Factor Behind Public Acceptance of Global Warming

Numerous factors may be driving higher levels of public acceptance and confidence in the existence of global warming, but Americans increasingly cite severe droughts as having a very large effect on their views. Sixty-one percent of Americans who think that global warming is occurring stated that severe droughts had a “very large” effect on their position on this issue. This 61% mark was the highest since 2008 when the NSEE began. As indicated in Table 3, the percentage of Americans saying severe droughts have had a very large effect on their acceptance of global warming has increased in each of the last five NSEE surveys since Spring 2013, more than doubling since then.

Table 3
The effect of severe droughts across the United States on an individual’s view that Earth is getting warmer, among Americans who believe global warming is occurring

	Fall 2008	Spring 2010	Fall 2010	Spring 2011	Fall 2011	Spring 2012	Fall 2012	Spring 2013	Fall 2013	Spring 2014	Fall 2014	Spring 2015	Fall 2015
Very Large	47%	29%	41%	29%	35%	29%	39%	28%	37%	45%	50%	56%	61%
Somewhat Large	32%	38%	35%	39%	55%	41%	44%	54%	49%	40%	36%	32%	25%
Not Too Large	8%	14%	13%	17%	6%	18%	8%	11%	9%	8%	7%	6%	6%
No Effect	9%	14%	10%	14%	3%	9%	6%	5%	5%	5%	5%	5%	5%
Not Sure	3%	5%	2%	1%	2%	3%	3%	3%	1%	2%	2%	2%	3%

Question: “I would like to read you a list of factors that may or may not have had an effect on your view that the earth is getting warmer. For each factor that I mention please indicate if it has had a very large, somewhat large, not too large, or no effect on your view that the earth is getting warmer.”

The recent increase in the number of Americans indicating severe droughts are having a very large effect on their view that global warming is occurring has elevated this type of evidence to the top of the list of factors affecting beliefs on this matter (see Table 4). Declining glaciers and polar ice were also identified as highly influential, with 59% claiming that these changes were having a very large effect on their beliefs. In the Fall 2015 survey, extreme weather events such as major storms and floods also reached a record high level in terms of effect on individual acceptance of global warming with 55% of believers in global warming claiming this factor had a large effect on their belief. This is 1% higher than the previous record set in Spring 2015.



Table 4
Percent of Americans who indicate each factor had a “very large” effect on their view that global warming is occurring, among Americans who believe global warming is happening

Factor	Percent
Severe droughts in area across the United States	61%*
Declining glaciers and polar ice throughout the globe	59%
Extreme weather events such as major storms and floods	55%*
Warmer temperatures in your area during recent years	45%
Declining numbers of polar bears and penguins	39%
The strength of hurricanes hitting the United States	36%
Computer models that indicate the earth is getting warmer	24%
Milder Winters in your area	23%

* Represents a record level since Fall 2008

Question: “I would like to read you a list of factors that may or may not have had an effect on your view that the earth is getting warmer. For each factor that I mention please indicate if it has had a very large, somewhat large, not too large, or no effect on your view that the earth is getting warmer.”

Personal Observations of Weather have Decreasing Impact on Global Warming Doubters

Among Americans who doubt the evidence regarding global warming, a previously key determining factor appears to be waning in terms of its influence on their views. In Fall 2015 slightly less than 1 out of 3 (32%) global warming doubters indicated that their personal observations of weather had a “very large” effect on their view that global warming is not occurring. This is the lowest percentage of global warming doubters to say that personal observations of weather had a very large effect on their position since Fall 2012 when 31% of this group provided such a rating. Further, the Fall 2015 survey results are down 13% points from a year ago, and down 18% from Spring 2015 (see Table 5). The Fall 2015 results also show a record number of global warming doubters (34%) stating that their weather observations had “no effect” on their position that global warming is not occurring.

Table 5
The effect of personal observations of weather on an individual’s belief that global warming is not happening, among Americans who do not believe there is evidence of global warming

	Fall 2010	Fall 2011	Spring 2012	Fall 2012	Spring 2013	Fall 2013	Spring 2014	Fall 2014	Spring 2015	Fall 2015
Very Large	38%	40%	23%	31%	40%	44%	56%	45%	50%	32%
Somewhat Large	29%	26%	18%	28%	36%	31%	25%	20%	26%	19%
Not Too Large	14%	14%	31%	18%	10%	13%	10%	11%	11%	13%
No Effect	18%	16%	28%	21%	14%	12%	10%	22%	13%	34%
Not Sure	<1%	1%	2%	2%	<1%	<1%	<1%	2%	<1%	1%

Question: “Next I would like to read you a list of factors that may or may not have had an effect on your view that global warming is NOT occurring. For each factor that I mention please indicate if it has had a very large, somewhat large, not too large, or no effect on your view that global warming is not occurring. Your personal observations of weather in your area.”

Conclusion

The latest iteration of the National Surveys on Energy and Environment finds that fewer Americans than at any time since 2008 doubt the existence of global warming. In turn, a near-record number of Americans believe there is evidence that global warming is happening, and most are very confident in that belief. NSEE results continue to show that Americans increasingly cite severe droughts in the United States as having a very large effect on their conclusions that global warming is occurring. What effect, if any, this increasing public acceptance of global warming has on public support for policies aimed at addressing climate change will be examined in subsequent reports.

Methods

The following report contains the results of a telephone survey of 911 adult (age 18 or older) residents of the United States between September 2 and September 24, 2015. Respondents were interviewed in English on both landlines (353) and cell phones (558) by the staff of the Muhlenberg College Institute of Public Opinion (MCIPO) in Allentown, Pennsylvania on the Institute's Computer Aided Telephone Interviewing (CATI) system. Of the 558 cell phone respondents, 428 had no landlines in their household. Both the landline and cell phone samples were provided by the Marketing Systems Group (MSG), Horsham, Pennsylvania. Both landline and cell phones were chosen randomly from sampling frames of United States landline and cell numbers provided by MSG.

With a randomly selected sample of 911 respondents the margin of error for the surveys is +/- 3.5% at a 95% level of confidence. Margins of error for questions with smaller sample sizes will be larger. In addition to sampling error, one should consider that question wording and other fielding issues can introduce error or bias into survey results. The sample data has been weighted by age, race, educational attainment, income and gender to reflect 2013 population parameters for these factors provided by the United States Census Bureau. The calculation of sampling error takes into account design effects due to the weighting identified above. In order to reach a representative sample of adult Americans both landlines and cell phones are called up to 10 times. The response rate for this survey as calculated using the American Association of Public Opinion Research (AAPOR) RR3 formula is 12%. Due to rounding, the totals provided in tables may not equal 100. The full instrument will be available upon release of subsequent reports in summer 2015. The instrument was designed by Christopher Borick of Muhlenberg College, Barry Rabe of the University of Michigan, Erick Lachapelle of the University of Montreal, and Sarah Mills of the University of Michigan. For more detailed information on the methods employed please contact the MCIPO at 484-664-3444 or email Dr. Borick at cborick@muhlenberg.edu.

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Any opinions, findings, conclusions, or recommendations expressed in this report are those of the author(s) and do not necessarily reflect the views of the Center for Local, State, and Urban Policy



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