American Views of Alternative Energy Choices: Wind, Solar and Nuclear Energy

Prepared for

Civil Society Institute (CSI)

Prepared by

OPINION RESEARCH CORPORATION

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FOUNDING MEMBER CASRO COUNCIL OF AMERICAN SURVEY RESEARCH ORGANIZATIONS

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Methodology

A series of questions was asked on CARAVAN®, Opinion Research Corporation's twice-weekly national shared-cost survey. The purpose of the research was to gain an understanding of the views of Americans on alternative energy sources.

Results are based on telephone interviews conducted among a sample of 1,016 adults (505 men and 511 women) age 18 and over, living in private households, in the continental United States. Interviewing was completed during the period of May 18-21, 2006.

Completed interviews of the 1,016 adults were weighted by four variables: age, sex, geographic region, and race, to ensure reliable and accurate representation of the total adult population.

The margin of error at a 95% confidence level is plus or minus three percentage points for the sample of 1,016 adults. Smaller sub-groups will have larger error margins.

Executive Summary

Strong and strikingly bipartisan majorities of Americans are deeply skeptical about nuclear power's role as a solution to America's energy crisis and the growing problem of global warming. Instead, Americans strongly favor developing clean, renewable energy alternatives and strategies that can be delivered more rapidly, including a greater emphasis on conservation, solar power and wind energy.

Key findings of the national opinion survey by the nonprofit and nonpartisan Civil Society Institute include the following:

- Over three out of four Americans (75 percent) would be concerned if "nuclear power was focused on at the expense of renewable, clean and safe alternative energy solutions" such as "solar, wind and other less expensive and more rapidly delivered energy solutions." Significantly, more than two out of five Americans (41 percent) said that they would be "definitely concerned" if nuclear power was allowed to eclipse other alternative energy solutions.
- More than three out of five Americans (61 percent) can't "afford to wait 10 or more years to put in place part of the solution to the energy crisis and global warming" if "building more nuclear power plants will take a decade or more in the U.S. and cost tens of billions of dollars." Only a third said the U.S. could wait for this solution to come on-line.

Executive Summary

- Politics does not seem to be a factor when it comes to supporting or opposing nuclear power and other energy alternatives. For example, a very nearly uniform 60 percent of conservatives, 62 percent of independents and 68 percent of liberals agree with the 61 percent of Americans who think the nation can't "afford to wait 10 or more years to put in place part of the solution to the energy crisis and global warming" if "building more nuclear power plants will take a decade or more in the U.S. and cost tens of billions of dollars." (However, the pro-nuclear crowd may have a friend in nonvoters, of whom 48 percent are not concerned about nuclear power industry delays and costs, compared to the 63 percent of voters who are.) In another illustration of the strikingly bipartisan nature of views on energy issues: Only 9 percent of conservatives, 8 percent of independents and 5 percent of liberals say have "no concerns about increased U.S. reliance on nuclear power."
- Most Americans would prefer to see the U.S. explore the use of more conservation, wind power or solar energy "before we resort to adding more nuclear power." The survey shows that "more conservation to reduce wasted energy" was supported as a first step by 88 percent of Americans (including 61 percent who said "definitely); solar power by 86 percent (including 57 percent who said "definitely yes"); and wind power by 81 percent (including 53 percent who said "definitely yes.")

Executive Summary

- Over three-fifths of Americans (62 percent) agree with the statement: "The energy and global warming problem is happening now. We need most of the emphasis placed on immediate and near-term solutions that will deliver fast results" such as "solar energy and wind power" and "increased conservation." Less than a third of American think most of the emphasis should be on "solutions that will deliver results a decade from now or later" such as "nuclear power and hydrogen fuel cells."
- Fewer than one out of 10 Americans (8 percent) have "no concerns about increased U.S. reliance on nuclear power." This contrasts sharply with Americans who cited such concerns as "lack of secure storage facilities for wastes that remain radioactive for thousands of years" (66 percent); "human error, as in Chernobyl and Three Mile Island" (58 percent); "risk of terrorist attacks" 56 percent; "high cost to ratepayer of constructing new nuclear energy facilities" (47 percent); and "limited availability of low-cost uranium for increased nuclear power production" (41 percent). (Respondents were allowed to identify more than one concern.)
- More than four out of five Americans (81 percent) do not "want to have a nuclear power plant reactor constructed next to or otherwise close" to their home – including 62 percent who said "definitely no" and in sharp contrast to the total of 16 percent who said "yes."

Executive Summary

- Roughly three out of five Americans (58 percent) think that “the highest priority should be put on alternative energy solutions that ‘fit’ the region – both in terms of the scale of the solution and how it takes advantage of the opportunities presented by the region in question.” Examples of such regional solutions include “the Pacific Northwest region (which) has long used its rivers to generate electrical power from hydropower dams” and “in the Eastern U.S., wind farms … cropping up along the coast to take advantage of ocean breezes.” Only about a third (35 percent) think “the highest priority should be put on alternative energy solutions that solve our nation's energy problems in a uniform and centrally organized manner, the same across the United States. Different regional issues and/or geographical realities shouldn’t influence the decision-making process.” (Nuclear power plant construction was cited to the respondent as an example of the “big technology” approach.)

Detailed Charts

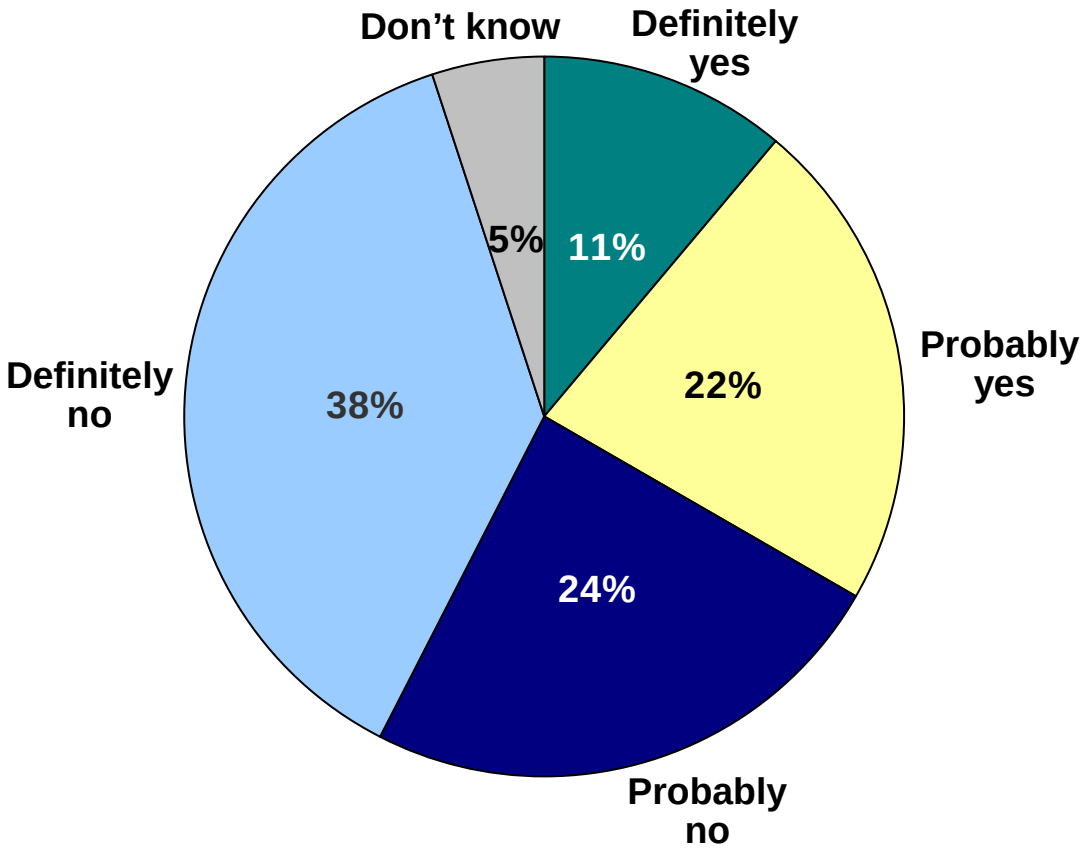
Can the U.S. Afford to Wait for Nuclear Power?

- About two-thirds (61%) do not think the U.S. can afford to wait 10 years or more to put in place part of the solution to the energy crisis and global warming. Of this group, 37% say definitely no and 24% say probably no. One third (33%) think we can afford to wait – 11% say definitely yes and 22% probably yes.
  - Women are more likely than men to think we can not afford to wait to put a solution in place (65% vs. 58%.)
  - The age group that is most likely to think we cannot wait are those aged 35-44 (69%).
  - Respondents who live alone (51%) are less likely than those in two (65%) or three person households (64%) to think we cannot wait for a solution.
  - Those without children in the household are also less likely to think we cannot wait (59%) compared to those who do have children in the household (67%).
  - Self-described liberals are the most likely to think we cannot wait (68%) and those who describe themselves as not political are the least likely to think we cannot wait (54%).
  - Those who say they are likely to vote in the 2006 or 2008 elections are the most likely to say we cannot wait (63%) compared to those who are not planning on voting (48%).

Can the U.S. Afford to Wait for Nuclear Power?

QE1: Experts say that building more nuclear power plants will take a decade or more in the U.S. and cost tens of billions of dollars. Do you think that the United States can afford to wait 10 or more years to put in place part of the solution to the energy crisis and global warming? Would you say…

U.S. Can't Afford to Wait



Base = Total respondents, 1,016 adults.

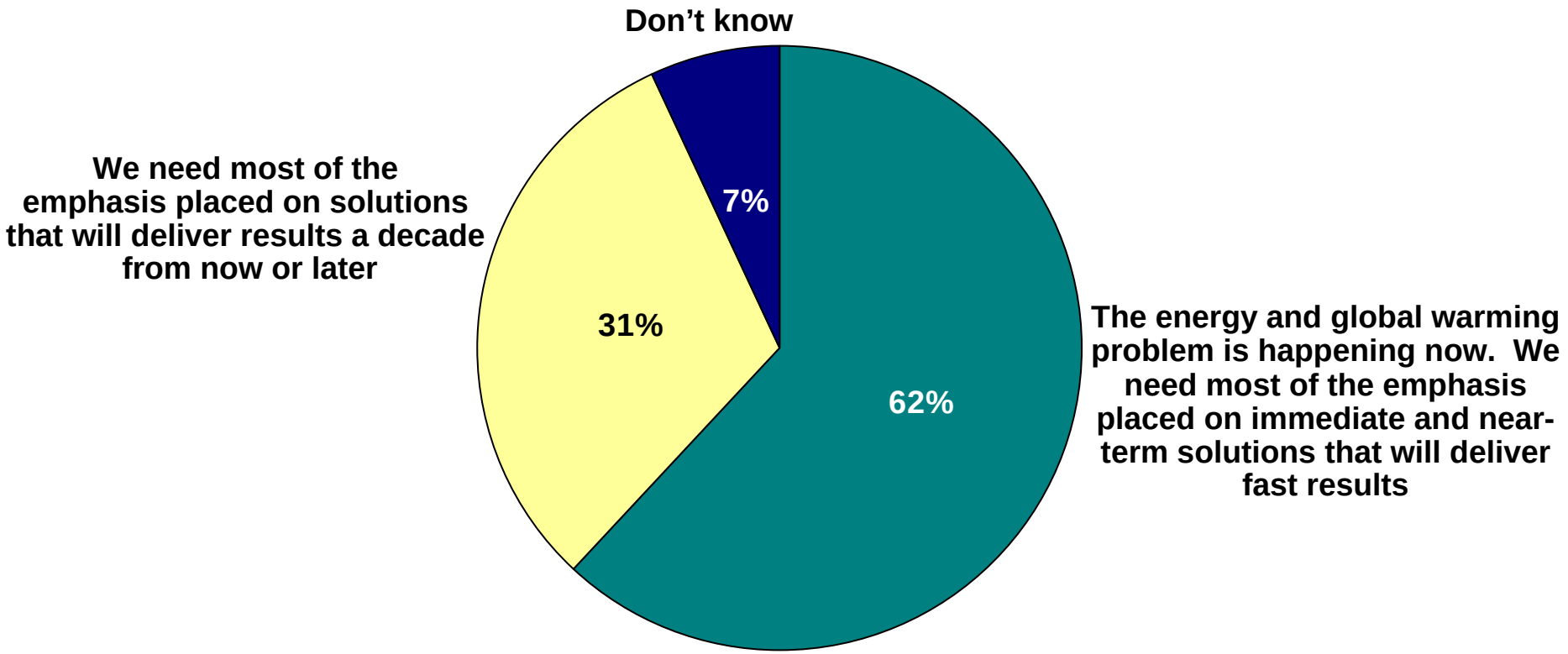
Short-Term or Long-Term Energy Solutions?

- The preference of most Americans (62%) is for immediate or near-term energy solutions that deliver fast results. Only 31% say our emphasis as a country should be placed on energy solutions that deliver results a decade or more from now.
  - Women are far more likely than men to favor immediate solutions (68% vs. 55%), while men tend to like those that deliver in the long term better than women (36% vs. 27%).
  - The age group that most prefers a long term solution is those age 25-34 (40%).
  - This is not a question where opinion varies ideologically: conservatives (59%), independents (63%), liberals (66%) and those who are not political (63%) all favor solutions to our energy problems that deliver fast solutions.

Short-Term or Long-Term Energy Solutions?

QE2: Experts have proposed a range of long-term and short-term solutions to the energy crisis and the threat posed by global warming. Some solutions – including solar energy and wind power – are already in place and would be expanded in the near-term. Others – such as increased conservation – could start immediately. Still others – including nuclear power and hydrogen fuel cells – would take a decade to put in place – or longer. What is your view of the BEST way for America to proceed? Would you say…

Immediate, Short-Term Solutions Best



Base = Total respondents, 1,016 adults.

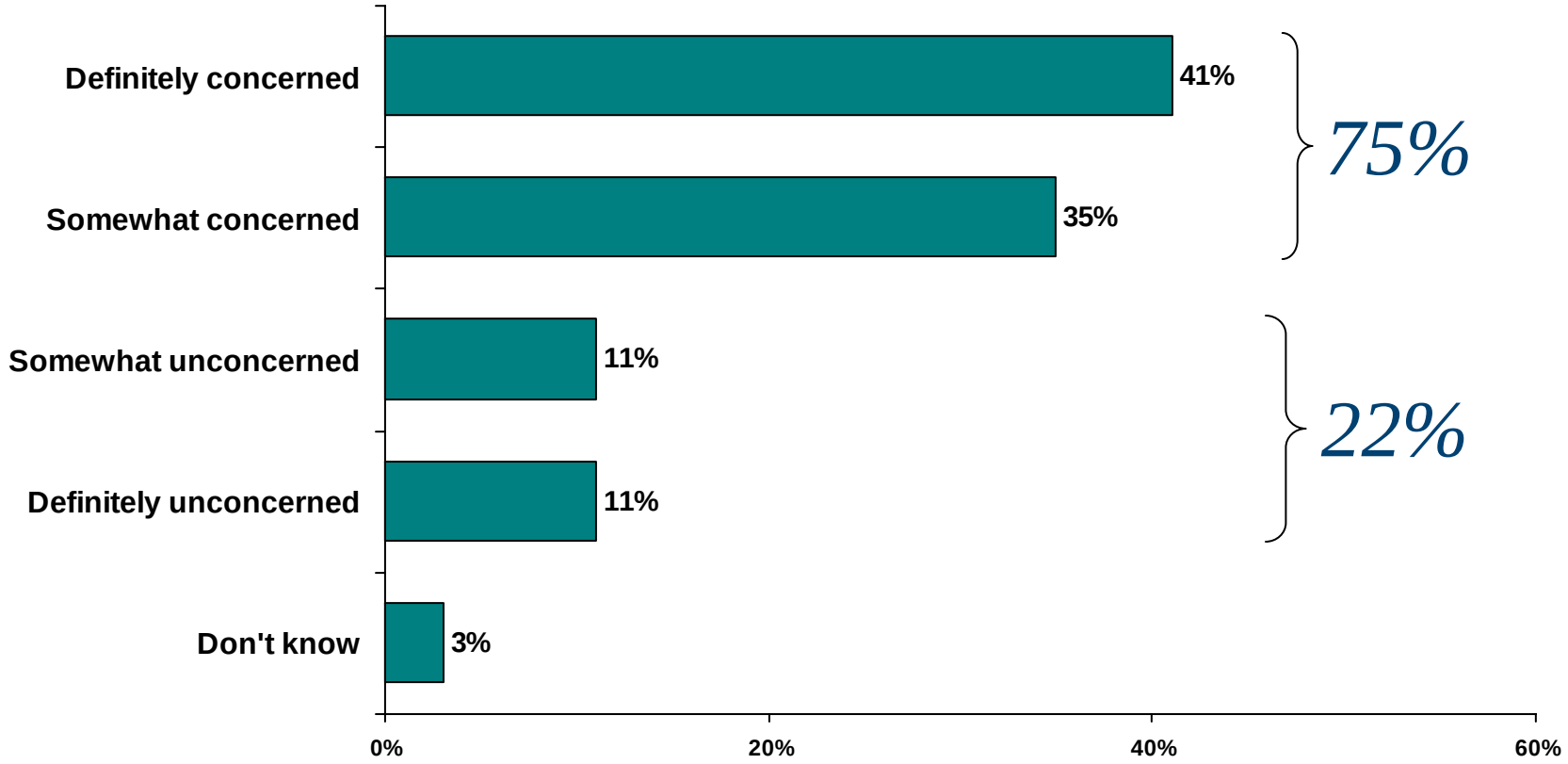
Where to Place Our Energy Focus?

- Americans do not want this country to focus on one type of alternative energy at the expense of any others. Three-fourths would be concerned if nuclear energy were focused on at the expense of renewable, clean, safe alternatives. Twenty-two percent would not be concerned if nuclear energy was the focus.
  - Gender once again is a strong determinant of opinion. Women are a lot more likely than men to be concerned if nuclear power is the focus at the expense of other alternatives (83% vs. 67%).
  - The age group that is most likely to be concerned are those 18-24 years of age (82%.)
  - Regionally respondents in the South (80%) and the Northeast (79%) would be a lot more concerned if nuclear power was the focus than respondents in the Midwest (68%).
  - Those in households with incomes of less than $35,000 are a lot more likely to be concerned (84%) than are those in households with incomes of $75,000 or more (69%).
  - Politically there is no difference between conservatives (73%), independents (77%), liberals (79%) or those who are not political (78%) on this question.
  - Those who say they will vote in 2006 or 2008 are as likely as those who say they won't vote to be concerned if nuclear energy is focused on at the expense of other alternatives (76% vs. 74%).

Where to Place Our Energy Focus?

QE3: Some experts say that more nuclear power in the United States is unrealistic, and that "talking up" nuclear power as a solution to U.S. energy needs is intended to discourage public and private investment in solar, wind and other less expensive and more rapidly delivered energy solutions. How concerned would you be if nuclear power was focused on at the expense of renewable, clean and safe alternative energy solutions? Would you be…

Majority of Americans Would be Concerned if Nuclear Power was Focus



Base = Total respondents, 1,016 adults.

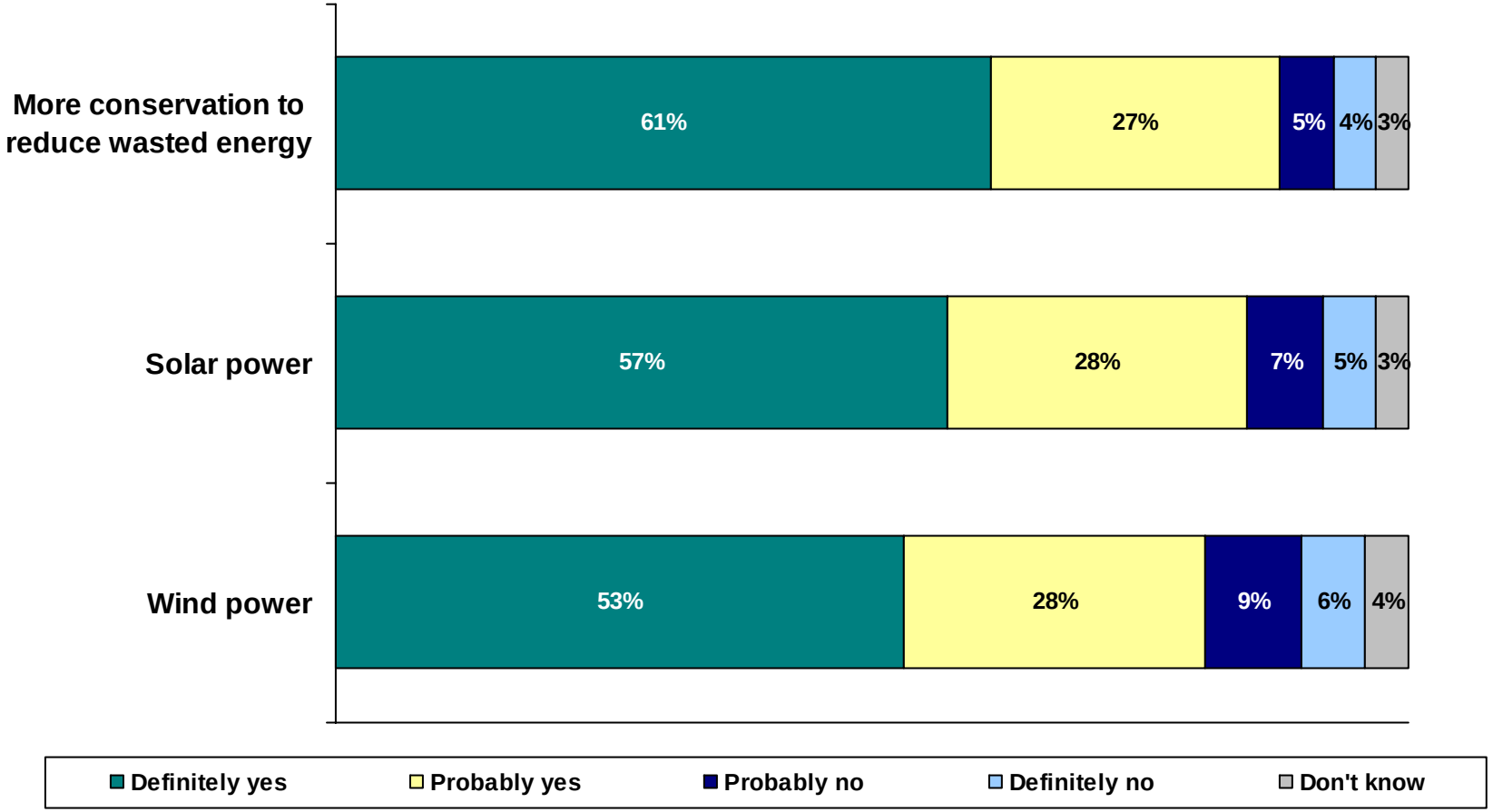
Explore Alternative Energy Before Adding Nuclear Power

- A substantial majority of Americans are in favor of conservation efforts to reduce wasted energy (88%), and exploring solar (86%) or wind power (81%) before adding more nuclear power to the country's energy sources.
  - Women are slightly more in favor of conservation, solar and wind power than men.
  - Independents are also slightly more likely to favor each of these three measures than liberals or conservatives.

Explore Alternative Energy Before Adding Nuclear Power

QE5: Some people are discussing the possibility of using more nuclear power in the United States. Would you prefer to see the U.S. explore the use of any of the following safe and sustainable energy steps and resources BEFORE we resort to adding more nuclear power? Please answer definitely yes, probably yes, probably no or definitely no.

Americans Prefer Exploring Alternative Energy Sources



Base = Total respondents, 1,016 adults.

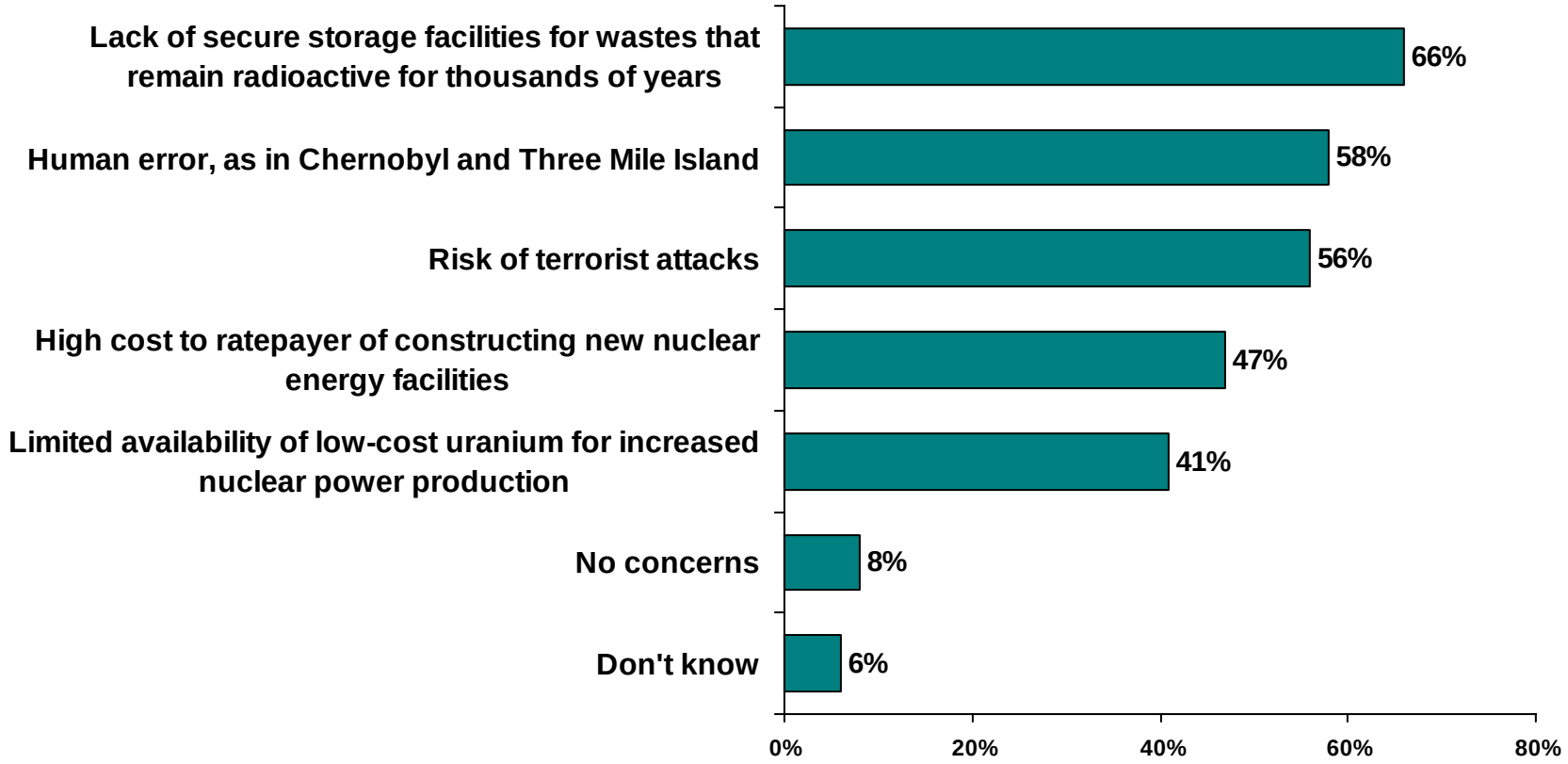
Concerns About U.S. Relying More on Nuclear Power

- Eighty-seven percent of respondents have some concern about the U.S. relying more on nuclear power. The top concerns are lack of secure storage for wastes (66%), human error (58%) and risk of terrorist attacks (56%). Forty-seven percent are concerned about the high cost to ratepayers of building new facilities and 41% worry about the limited availability of low-cost uranium.
  - Women are more likely than men to have any concerns about relying more on nuclear power, and to choose each of these individual items as concerns.
  - Those respondents age 45-54 are also more likely to have any concerns about relying more on nuclear fuel and to be concerned about each of those issues.
  - Liberals are more concerned about the issues of secure storage for wastes and human error than conservatives or independents.

Concerns About U.S. Relying More on Nuclear Power

QE6: Which, if any, of the following things concern you about the United States relying more on nuclear power?

Lack of Secure Storage Facilities is Top Concern



Base = Total respondents, 1,016 adults.

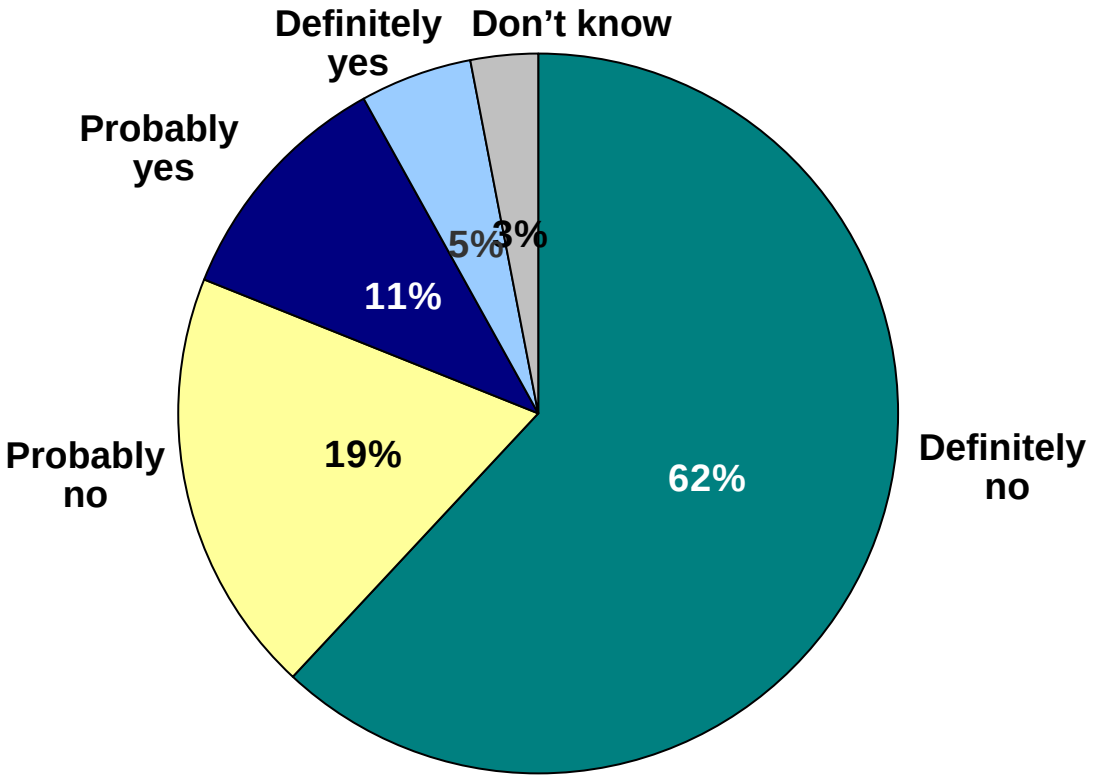
Nuclear Power Plant Reactor Near Home

- Eight respondents in 10 do not want a nuclear power reactor constructed next to or near their home. Sixteen percent would want one.
  - Women are more likely than men to say they do not want such a reactor near their home (89% vs. 72%).
  - Respondents with three or more people in the home are much more likely to not want a nuclear reactor near their home (85%) than households with one or two inhabitants (both 77%).
  - Liberals are the most likely to not want a nuclear reactor near their home (89%).

Nuclear Power Plant Reactor Near Home

QE7: Would you want to have a nuclear power plant reactor constructed next to or otherwise close to your home? Would you say…

Americans Would Not Want Nuclear Power Plant Reactor Near Their Home



Base = Total respondents, 1,016 adults.

Local or National Energy Solutions

- A majority of respondents (58%) prefer placing the highest priority on finding alternative energy solutions that "fit" the region rather than solutions that solve our nation's energy problems in a uniform and centrally organized manner (35%).
  - Liberals (66%) and Independents (62%) are more likely to say they favor local solutions that fit, than are Conservatives (52%).
  - Respondents who say they are definitely going to vote in the 2006 or 2008 elections are much more likely to say they favor local solutions that fit (61%) than are those who will "probably" vote (46%).

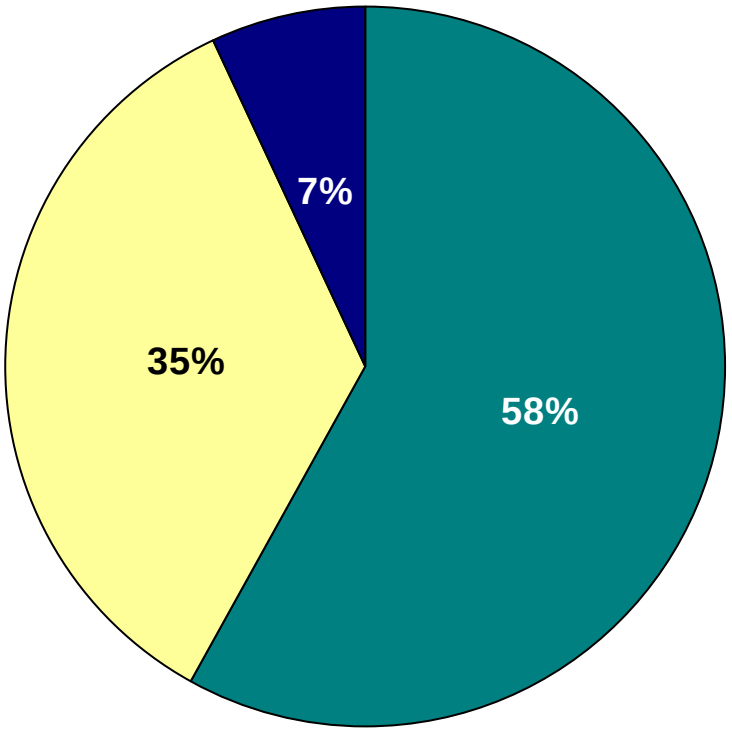
Local or National Energy Solutions

QE8: In addition to asking about the best timing of alternative energy solutions, we also want to know what you think about "appropriate" solutions – that is, what makes the most sense in different parts of the United States. For example, the Pacific Northwest region has long used its rivers to generate electrical power from hydropower dams. In the Eastern U.S., wind farms are cropping up along the coast to take advantage of ocean breezes. In the Southwest, solar power is increasingly popular for power generation. By contrast, some people advocate "big technology" solutions – such as nuclear power – whether or not there are smaller and more local solutions tailored to different regions in the U.S. Would you say…

Highest Priority – Take Advantage of Regional Solutions

Don't know

The highest priority should be put on alternative energy solutions that solve our nation's energy problems in a uniform and centrally organized manner, the same across the United States. Different regional issues and/or geographical realities shouldn't influence the decision-making process.



The highest priority should be put on alternative energy solutions – both in terms of the scale of the solution and how it takes advantage of the opportunities presented by the region in question.

Base = Total respondents, 1,016 adults.

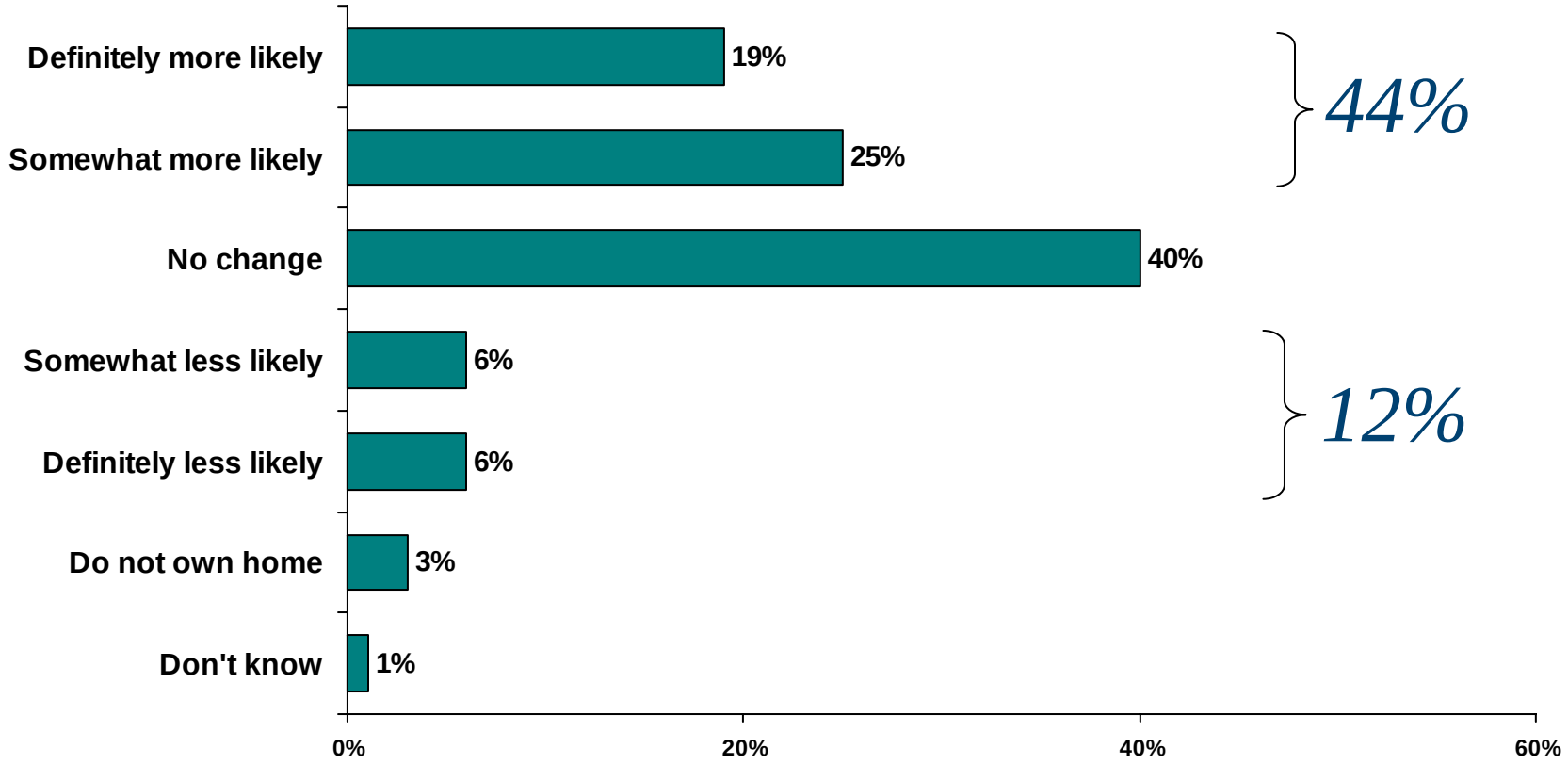
Likely to Consider Retrofitting Home

- As the cost of home heating and cooling continues to rise, more and more Americans are considering an alternative, renewable energy source. Forty-four percent say they are more likely now than last year to consider retrofitting their home to use solar, wind or other renewable energy. Forty percent say there has been no change in their likelihood to do this. Only 12% said they were less likely to do this now than a year ago.
  - More than half of those respondents age 35-44 (54%) say they are more likely now than a year ago to consider retrofitting their home.
  - Liberals are more likely than Conservatives to say they are considering retrofitting their home (51% vs. 36%).

Likely to Consider Retrofitting Home

QE4: Would you say that you are now more or less likely than you were A YEAR AGO to consider retrofitting your home to use solar, wind or other renewable energy? Would you say you are…

Americans More Likely to Consider Retrofitting Their Home Compared to a Year Ago

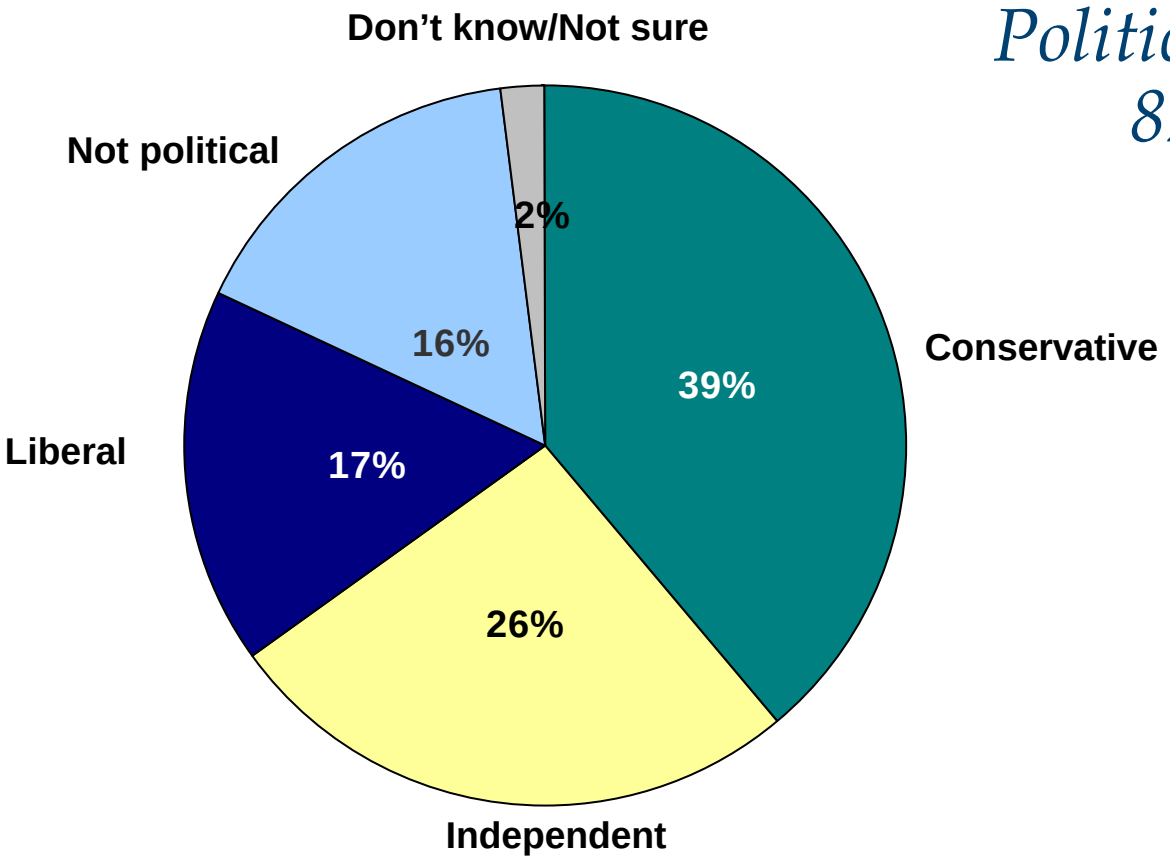


Base = Total respondents, 1,016 adults.

Political and Ideological Identification

QE9: How would you describe yourself? Would you say…?

Most Consider Themselves Political



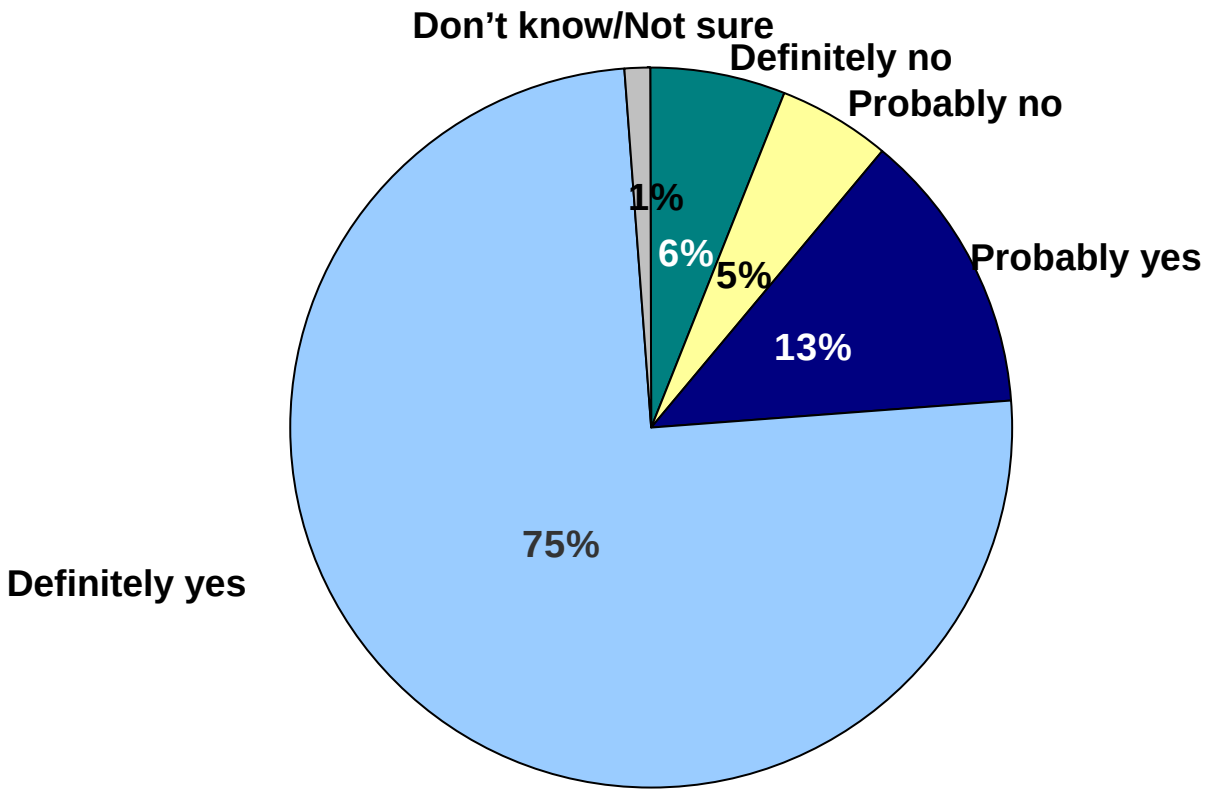
Political (net) 82%

Base = Total respondents, 1,016 adults.

Vote Intention

QE10: Do you intend to vote in the 2006 or 2008 elections? Would you say…?

Most Say They Will Vote



Base = Total respondents, 1,016 adults.

APPENDIX

RELIABILITY OF SURVEY PERCENTAGES

Results of any sample are subject to sampling variation. The magnitude of the variation is measurable and is affected by the number of interviews and the level of the percentages expressing the results.

The table below shows the possible sample variation that applies to percentage results reported herein. The chances are 95 in 100 that a survey result does not vary, plus or minus, by more than the indicated number of percentage points from the result that would be obtained if interviews had been conducted with all persons in the universe represented by the sample.

Size of Sample on Which Survey Results Are Based	Approximate Sampling Tolerances Applicable to Percentages At or Near These Levels				
	10% or 90%	20% or 80%	30% or 70%	40% or 60%	50%
1,000 interviews	2%	2%	3%	3%	3%
500 interviews	3%	4%	4%	4%	4%
250 interviews	4%	5%	6%	6%	6%
100 interviews	6%	8%	9%	10%	10%

Additional Sampling Tolerances for Samples of 1,000 Interviews

9% or 91%	8% or 92%	7% or 93%	6% or 94%	5% or 95%
2%	2%	2%	1%	1%

4% or 96%	3% or 97%	2% or 98%	1% or 99%
1%	1%	1%	2%

SAMPLING TOLERANCES WHEN COMPARING TWO SAMPLES

Tolerances are also involved in the comparison of results from independent parts of the sample. A difference, in other words, must be of at least a certain number of percentage points to be considered statistically significant – that is not due to random chance. The table below is a guide to the sampling tolerances in percentage points applicable to such comparisons, based on a 95% confidence level.

Size of Samples Compared	Differences Required for Significance At or Near These Percentage Levels				
	10% or 90%	20% or 80%	30% or 70%	40% or 60%	50%
1,000 and 1,000	3%	4%	4%	4%	4%
1,000 and 500	3%	4%	5%	5%	5%
1,000 and 250	4%	6%	6%	7%	7%
1,000 and 100	6%	8%	9%	10%	10%
500 and 500	4%	5%	6%	6%	6%
500 and 250	5%	6%	7%	7%	8%
500 and 100	6%	9%	10%	11%	11%
250 and 250	5%	7%	8%	9%	9%
250 and 100	7%	9%	11%	11%	12%
100 and 100	8%	11%	13%	14%	14%

Topline Results of Telephone Interviews with 1,016 adults Americans,
Conducted May 18-21, 2006.

E1 Experts say that building more nuclear power plants will take a decade or more in the U.S. and cost tens of billions of dollars. Do you think that the United States can afford to wait 10 or more years to put in place part of the solution to the energy crisis and global warming? Would you say . . . [READ LIST. RECORD ONE ANSWER]

11%	Definitely yes
22%	Probably yes
24%	Probably no
37%	Definitely no
5%	DON'T KNOW/NOT SURE

E2 Experts have proposed a range of long-term and short-term solutions to the energy crisis and the threat posed by global warming. Some solutions—including solar energy and wind power—are already in place and would be expanded in the near-term. Others—such as increased conservation—could start immediately. Still others—including nuclear power and hydrogen fuel cells—would take a decade to put in place—or longer. What is your view of the BEST way for America to proceed? Would you say . . . [READ ENTIRE LIST BEFORE RECORDING ONE ANSWER. ROTATE]

62%	The energy and global warming problem is happening now. We need most of the emphasis placed on immediate and near-term solutions that will deliver fast results
31%	We need most of the emphasis placed on solutions that will deliver results a decade from now or later
7%	DON'T KNOW/NOT SURE

E3 Some experts say that more nuclear power in the United States is unrealistic, and that "talking up" nuclear power as a solution to U.S. energy needs is intended to discourage public and private investment in solar, wind and other less expensive and more rapidly delivered energy solutions. How concerned would you be if nuclear power was focused on at the expense of renewable, clean and safe alternative energy solutions? Would you be . . . [READ LIST. RECORD ONE ANSWER]

41%	Definitely concerned
35%	Somewhat concerned
11%	Somewhat unconcerned
11%	Definitely unconcerned
3%	DON'T KNOW/NOT SURE

E4 Would you say that you are now more or less likely than you were A YEAR AGO to consider retrofitting your home to use solar, wind or other renewable energy? Would you say you are . . . [READ LIST. RECORD ONE ANSWER]

6% Definitely less likely
6% Somewhat less likely
40% No change
25% Somewhat more likely
19% Definitely more likely
3% DO NOT OWN HOME/NOT APPLICABLE
1% DON'T KNOW/NOT SURE

E5 Some people are discussing the possibility of using more nuclear power in the United States. Would you prefer to see the U.S. explore the use of any of the following safe and sustainable alternative energy steps and resources BEFORE we resort to adding more nuclear power? Please answer definitely yes, probably yes, probably no or definitely no. [READ AND ROTATE ITEMS]

A. More conservation to reduce wasted energy
61% Definitely yes
27% Probably yes
5% Probably no
4% Definitely no
3% DON'T KNOW/NOT SURE

B. Wind power
53% Definitely yes
28% Probably yes
9% Probably no
6% Definitely no
4% DON'T KNOW/NOT SURE

C. Solar power
57% Definitely yes
28% Probably yes
7% Probably no
5% Definitely no
3% DON'T KNOW/NOT SURE

E6 Which, if any, of the following things concern you about the United States relying more on nuclear power? [READ AND ROTATE LIST. RECORD AS MANY AS APPLY. WAIT FOR YES OR NO FOR EACH]

56% Risk of terrorist attacks
58% Human error, as in Chernobyl and Three Mile Island
66% Lack of secure storage facilities for wastes that remain radioactive for thousands of years
47% High cost to ratepayer of constructing new nuclear energy facilities
41% Limited availability of low-cost uranium for increased nuclear power production
8% I HAVE NO CONCERNS ABOUT INCREASED U.S. RELIANCE ON NUCLEAR POWER
6% DON'T KNOW/NOT SURE

E7 Would you want to have a nuclear power plant reactor constructed next to or otherwise close to your home? Would you say . . . [READ LIST. RECORD ONE ANSWER]

62% Definitely no
19% Probably no
11% Probably yes
5% Definitely yes
3% DON'T KNOW/NOT SURE

E8 In addition to asking about the best timing of alternative energy solutions, we also want to know what you think about "appropriate" solutions – that is, what makes the most sense in different parts of the United States. For example, the Pacific Northwest region has long used its rivers to generate electrical power from hydropower dams. In the Eastern U.S., wind farms are cropping up along the coast to take advantage of ocean breezes. In the Southwest, solar power is increasingly popular for power generation. By contrast, some people advocate "big technology" solutions – such as nuclear power – whether or not there are smaller and more local solutions tailored to different regions in the U.S. Would you say… [READ AND ROTATE LIST. RECORD ONE ANSWER]

58% The highest priority should be put on alternative energy solutions that "fit" the region – both in terms of the scale of the solution and how it takes advantage of the opportunities presented by the region in question.

35% The highest priority should be put on alternative energy solutions that solve our nation's energy problems in a uniform and centrally organized manner, the same across the United States. Different regional issues and/or geographical realities shouldn't influence the decision-making process.

7% DON'T KNOW/NOT SURE

E9 How would you describe yourself? Would you say . . . [READ LIST. RECORD ONE ANSWER]

39% Conservative
26% Independent
17% Liberal
16% Not political
2% DON'T KNOW/NOT SURE

E10 Do you intend to vote in the 2006 or 2008 elections? Would you say . . . [READ LIST. RECORD ONE ANSWER]

6% Definitely no
5% Probably no
13% Probably yes
75% Definitely yes
1% DON'T KNOW/NOT SURE