Clean Energy National Online Survey

Key findings from a national online survey of 1,000 registered voters, conducted November 18-21, 2021.
Methodology

Public Opinion Strategies is pleased to present the key findings from an online survey of 1,000 registered voters nationwide, conducted November 18-21, 2021, with a credibility interval of ±3.53%.

Glen Bolger was the principal researcher. Torie Bolger was the project director, and Katie Connolly provided analytical support.
Political Environment
A majority of Americans are pessimistic about the future of the country.

“Would you say that things in the country are going in the right direction, or have they pretty seriously gotten off on the wrong track?”

<table>
<thead>
<tr>
<th>RCP National Average</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Right Direction</td>
<td>29%</td>
</tr>
<tr>
<td>Wrong Track</td>
<td>63%</td>
</tr>
</tbody>
</table>

A majority of Americans are pessimistic about the future of the country.
Only Democrats believe the country is headed in the right direction.

National Mood Trend by Party

**Total GOP (39%)**
- 11/16: 59%
- 2/18: 18%
- 11/18: 19%
- 11/19: 25%
- 10/20: 37%
- 12/20: 41%
- 11/21: 13%

**Ind (18%)**
- 11/16: 61%
- 2/18: 59%
- 11/18: 58%
- 11/19: 59%
- 10/20: 83%
- 12/20: 75%
- 11/21: 75%

**Total Dem (43%)**
- 11/16: 68%
- 2/18: 86%
- 11/18: 89%
- 11/19: 91%
- 10/20: 89%
- 12/20: 80%
- 11/21: 63%

- Right Direction
- Wrong Track
The generic ballot is a statistical tie. The high number of undecideds indicates a lot of voters are waiting to see what happens.

“If the election for U.S. Congress were being held today, for whom would you vote... the Republican candidate ...or... the Democratic candidate?”

- Republican Candidate
- Democratic Candidate

<table>
<thead>
<tr>
<th>Date</th>
<th>Republican</th>
<th>Democratic</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/16</td>
<td>45%</td>
<td>55%</td>
</tr>
<tr>
<td>2/18</td>
<td>38%</td>
<td>62%</td>
</tr>
<tr>
<td>11/18</td>
<td>41%</td>
<td>59%</td>
</tr>
<tr>
<td>11/19</td>
<td>39%</td>
<td>61%</td>
</tr>
<tr>
<td>10/20</td>
<td>44%</td>
<td>56%</td>
</tr>
<tr>
<td>12/20</td>
<td>45%</td>
<td>55%</td>
</tr>
<tr>
<td>11/21</td>
<td>40%</td>
<td>60%</td>
</tr>
</tbody>
</table>
Only older men prefer a Republican candidate.

**Generic Ballot Trend by Gender/Age**

**Men 18-34 (14%)**
- 11/16: 48%, 42%
- 2/18: 51%, 32%
- 11/18: 50%, 41%
- 11/19: 53%, 26%
- 10/20: 53%, 47%
- 12/20: 67%, 25%
- 11/21: 40%, 38%

**Men 55+ (19%)**
- 11/16: 57%, 33%
- 2/18: 49%, 34%
- 11/18: 45%, 40%
- 11/19: 43%, 41%
- 10/20: 57%, 43%
- 12/20: 60%, 37%
- 11/21: 46%, 37%

**Men 35-54 (15%)**
- 11/16: 51%, 41%
- 2/18: 49%, 34%
- 11/18: 53%, 37%
- 11/19: 43%, 37%
- 10/20: 47%, 47%
- 12/20: 47%, 45%
- 11/21: 44%, 44%

**Women 18-34 (19%)**
- 11/16: 70%, 26%
- 2/18: 69%, 19%
- 11/18: 71%, 24%
- 11/19: 63%, 23%
- 10/20: 68%, 32%
- 12/20: 59%, 31%
- 11/21: 39%, 37%

**Women 35-54 (17%)**
- 11/16: 53%, 45%
- 2/18: 50%, 40%
- 11/18: 53%, 38%
- 11/19: 60%, 40%
- 10/20: 62%, 35%
- 12/20: 42%, 37%
- 11/21: 42%, 37%

**Women 55+ (16%)**
- 11/16: 47%, 45%
- 2/18: 54%, 35%
- 11/18: 54%, 38%
- 11/19: 45%, 44%
- 10/20: 60%, 40%
- 12/20: 50%, 47%
- 11/21: 50%, 37%

Republicanism is significantly weaker among women between 18-34 and 35-54 as well as among older men.

*Note: Numbers represent percentage of respondents who support the respective candidate.*

Clean Energy National Online Survey – November 18-21, 2021
A majority of American voters disapprove of the job Joe Biden is doing as President.

“Do you approve or disapprove of the job Joe Biden is doing as President?”

<table>
<thead>
<tr>
<th>Approval Level</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Approve</td>
<td>17%</td>
</tr>
<tr>
<td>Somewhat Approve</td>
<td>30%</td>
</tr>
<tr>
<td>Total Approve</td>
<td>47%</td>
</tr>
<tr>
<td>Strongly Disapprove</td>
<td>37%</td>
</tr>
<tr>
<td>Somewhat Disapprove</td>
<td>16%</td>
</tr>
<tr>
<td>Total Disapprove</td>
<td>53%</td>
</tr>
</tbody>
</table>
Biden has a weak approval rating from Independents. Only Democrats approve of his performance.

*Biden Approval by Party*

- Total GOP (39%): Approve 89%, Disapprove 11%
- Ind (18%): Approve 36%, Disapprove 64%
- Total Dem (43%): Approve 84%, Disapprove 16%

Biden has a weak approval rating from Independents. Only Democrats approve of his performance.
Three quarters of registered voters support the infrastructure bill that recently passed Congress.

“Congress recently passed a bipartisan, one trillion dollar bill that will fund projects to build roads, bridges, railroads, and other “hard” infrastructure. Do you support or oppose this bill?”

<table>
<thead>
<tr>
<th>Support Level</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Support</td>
<td>37%</td>
</tr>
<tr>
<td>Somewhat Support</td>
<td>38%</td>
</tr>
<tr>
<td>Total Support</td>
<td>75%</td>
</tr>
<tr>
<td>Strongly Oppose</td>
<td>10%</td>
</tr>
<tr>
<td>Somewhat Oppose</td>
<td>15%</td>
</tr>
<tr>
<td>Total Oppose</td>
<td>25%</td>
</tr>
</tbody>
</table>
Issues
Voters say rising prices and jobs/the economy are the most pressing issues.

“Thinking now about issues, please indicate how important each of the following issues is to you on a scale of one to ten, where one means that issue is not at all important to you and ten means that issue is extremely important to you. Of course, you can choose any number between one and ten.”

Ranked by %10 November 2021

<table>
<thead>
<tr>
<th>Issue</th>
<th>%10 (11/21)</th>
<th>%8-10 (11/21)</th>
<th>%10 (12/20)</th>
<th>%8-10 (12/20)</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rising Prices</td>
<td>49%</td>
<td>50%</td>
<td>48%</td>
<td>46%</td>
<td>75%</td>
</tr>
<tr>
<td>Jobs and the Economy</td>
<td>48%</td>
<td>50%</td>
<td>48%</td>
<td>46%</td>
<td>82%</td>
</tr>
<tr>
<td>Health Care</td>
<td>46%</td>
<td>48%</td>
<td>46%</td>
<td>48%</td>
<td>79%</td>
</tr>
<tr>
<td>Social Security and Medicare</td>
<td>42%</td>
<td>46%</td>
<td>46%</td>
<td>48%</td>
<td>72%</td>
</tr>
<tr>
<td>Coronavirus</td>
<td>41%</td>
<td>54%</td>
<td>46%</td>
<td>62%</td>
<td>75%</td>
</tr>
<tr>
<td>Crime</td>
<td>40%</td>
<td>37%</td>
<td>40%</td>
<td>70%</td>
<td>71%</td>
</tr>
<tr>
<td>National Security and Fighting Terrorism</td>
<td>40%</td>
<td>42%</td>
<td>40%</td>
<td>69%</td>
<td>72%</td>
</tr>
<tr>
<td>Education</td>
<td>39%</td>
<td>34%</td>
<td>39%</td>
<td>64%</td>
<td>70%</td>
</tr>
<tr>
<td>Taxes</td>
<td>38%</td>
<td>35%</td>
<td>38%</td>
<td>70%</td>
<td>70%</td>
</tr>
<tr>
<td>Climate Change</td>
<td>34%</td>
<td>35%</td>
<td>34%</td>
<td>58%</td>
<td>71%</td>
</tr>
<tr>
<td>Energy</td>
<td>32%</td>
<td>25%</td>
<td>32%</td>
<td>62%</td>
<td>60%</td>
</tr>
</tbody>
</table>

Mean: 8.4
Domestic Energy Production
Americans believe more emphasis should be placed on wind, solar power, and hydropower.

“Do you think that, as a country, the United States should put more emphasis, less emphasis, or about the same emphasis as it does now on producing domestic energy from each of the following sources...”

### Wind
- More Emphasis: 70% 66% 64% 67% 60% 55% 60%
- Less Emphasis: 13% 9% 14% 15% 11% 18% 19%

### Solar Power
- More Emphasis: 76% 75% 74% 75% 66% 64% 70%
- Less Emphasis: 10% 7% 9% 10% 9% 13% 13%

### Hydropower
- More Emphasis: 61% 59% 54% 56% 55% 57% 59%
- Less Emphasis: 7% 6% 6% 6% 10% 10% 14%
There is little support for putting more emphasis on coal. Voters are split on the use of nuclear power.

“Do you think that, as a country, the United States should put more emphasis, less emphasis, or about the same emphasis as it does now on producing domestic energy from each of the following sources…”

**Coal**

<table>
<thead>
<tr>
<th></th>
<th>11/16</th>
<th>2/18</th>
<th>11/18</th>
<th>11/19</th>
<th>10/20</th>
<th>12/20</th>
<th>11/21</th>
</tr>
</thead>
<tbody>
<tr>
<td>More</td>
<td>51%</td>
<td>59%</td>
<td>54%</td>
<td>56%</td>
<td>51%</td>
<td>47%</td>
<td>51%</td>
</tr>
<tr>
<td>Less</td>
<td>23%</td>
<td>16%</td>
<td>16%</td>
<td>18%</td>
<td>17%</td>
<td>20%</td>
<td>24%</td>
</tr>
</tbody>
</table>

**Natural Gas**

<table>
<thead>
<tr>
<th></th>
<th>11/16</th>
<th>2/18</th>
<th>11/18</th>
<th>11/19</th>
<th>10/20</th>
<th>12/20</th>
<th>11/21</th>
</tr>
</thead>
<tbody>
<tr>
<td>More</td>
<td>41%</td>
<td>37%</td>
<td>42%</td>
<td>41%</td>
<td>42%</td>
<td>46%</td>
<td>48%</td>
</tr>
<tr>
<td>Less</td>
<td>23%</td>
<td>19%</td>
<td>17%</td>
<td>18%</td>
<td>20%</td>
<td>18%</td>
<td>23%</td>
</tr>
</tbody>
</table>

**Nuclear Power**

<table>
<thead>
<tr>
<th></th>
<th>11/16</th>
<th>2/18</th>
<th>11/18</th>
<th>11/19</th>
<th>10/20</th>
<th>12/20</th>
<th>11/21</th>
</tr>
</thead>
<tbody>
<tr>
<td>More</td>
<td>39%</td>
<td>36%</td>
<td>33%</td>
<td>34%</td>
<td>32%</td>
<td>34%</td>
<td>37%</td>
</tr>
<tr>
<td>Less</td>
<td>27%</td>
<td>28%</td>
<td>27%</td>
<td>32%</td>
<td>31%</td>
<td>33%</td>
<td>34%</td>
</tr>
</tbody>
</table>

More Emphasis: Blue
Less Emphasis: Red
There is moderate support for placing more emphasis on geothermal and carbon capture energy.

“Do you think that, as a country, the United States should put more emphasis, less emphasis, or about the same emphasis as it does now on producing domestic energy from each of the following sources...”

+33

+21

49% 16% 44% 23%

Geothermal Carbon Capture

More Emphasis Less Emphasis
Republicans are supportive of placing more emphasis on natural gas, wind, solar power, nuclear power, and hydropower.

Energy Emphasis Trend by GOPers (39%)

<table>
<thead>
<tr>
<th>Energy Source</th>
<th>More Emphasis</th>
<th>Less Emphasis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal</td>
<td>35% 31% 29% 30% 34% 29% 37%</td>
<td>27% 29% 27% 29% 23% 28% 33%</td>
</tr>
<tr>
<td>Wind</td>
<td>53% 44% 45% 39% 46% 37% 45%</td>
<td>20% 17% 26% 30% 18% 29% 31%</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>52% 47% 52% 50% 49% 55% 61%</td>
<td>11% 9% 7% 5% 10% 8% 11%</td>
</tr>
<tr>
<td>Solar Power</td>
<td>63% 56% 58% 50% 51% 45% 59%</td>
<td>15% 15% 16% 2... 13% 21% 21%</td>
</tr>
<tr>
<td>Nuclear Power</td>
<td>32% 33% 33% 35% 40% 40% 47%</td>
<td>29% 28% 2... 24% 19% 23% 25%</td>
</tr>
<tr>
<td>Hydropower</td>
<td>57% 57% 47% 45% 46% 47% 51%</td>
<td>6% 6% 7% 9% 10% 11% 20%</td>
</tr>
</tbody>
</table>

Republicans are supportive of placing more emphasis on natural gas, wind, solar power, nuclear power, and hydropower.
Independents want less emphasis on coal and nuclear power.

### Energy Emphasis Trend by Inds (18%)

#### Coal

- **More Emphasis**
  - November 11/16: 50%
  - January 2/18: 26%
  - November 11/18: 11%
  - January 11/19: 13%
  - October 10/20: 12%
  - December 12/20: 9%
  - November 11/21: 15%

- **Less Emphasis**
  - November 11/16: 69%
  - January 2/18: 69%
  - November 11/18: 59%
  - January 11/19: 59%
  - October 10/20: 58%
  - December 12/20: 66%
  - November 11/21: 48%

#### Natural Gas

- **More Emphasis**
  - November 11/16: 36%
  - January 2/18: 22%
  - November 11/18: 65%
  - January 11/19: 65%
  - October 10/20: 68%
  - December 12/20: 70%
  - November 11/21: 56%

- **Less Emphasis**
  - November 11/16: 29%
  - January 2/18: 71%
  - November 11/18: 65%
  - January 11/19: 65%
  - October 10/20: 70%
  - December 12/20: 70%
  - November 11/21: 62%

#### Wind

- **More Emphasis**
  - November 11/16: 65%
  - January 2/18: 65%
  - November 11/18: 65%
  - January 11/19: 68%
  - October 10/20: 70%
  - December 12/20: 56%
  - November 11/21: 17%

- **Less Emphasis**
  - November 11/16: 34%
  - January 2/18: 11%
  - November 11/18: 11%
  - January 11/19: 17%
  - October 10/20: 17%
  - December 12/20: 8%
  - November 11/21: 19%

#### Solar Power

- **More Emphasis**
  - November 11/16: 71%
  - January 2/18: 71%
  - November 11/18: 70%
  - January 11/19: 70%
  - October 10/20: 79%
  - December 12/20: 72%
  - November 11/21: 61%

- **Less Emphasis**
  - November 11/16: 22%
  - January 2/18: 22%
  - November 11/18: 16%
  - January 11/19: 16%
  - October 10/20: 10%
  - December 12/20: 10%
  - November 11/21: 9%

#### Nuclear Power

- **More Emphasis**
  - November 11/16: 34%
  - January 2/18: 38%
  - November 11/18: 36%
  - January 11/19: 40%
  - October 10/20: 37%
  - December 12/20: 36%
  - November 11/21: 47%

- **Less Emphasis**
  - November 11/16: 31%
  - January 2/18: 25%
  - November 11/18: 30%
  - January 11/19: 37%
  - October 10/20: 37%
  - December 12/20: 32%
  - November 11/21: 26%

#### Hydropower

- **More Emphasis**
  - November 11/16: 53%
  - January 2/18: 56%
  - November 11/18: 55%
  - January 11/19: 55%
  - October 10/20: 58%
  - December 12/20: 61%
  - November 11/21: 52%

- **Less Emphasis**
  - November 11/16: 6%
  - January 2/18: 7%
  - November 11/18: 8%
  - January 11/19: 7%
  - October 10/20: 8%
  - December 12/20: 11%
  - November 11/21: 13%
Party Issue Handling
Pluralities of voters think Democrats would do a better job handling the environment and climate change.

“Now please read the list of issues below and indicate which party you think would do a better job the Democratic Party, the Republican Party, or both about the same? If you think that neither would do a good job, please indicate that below.”

-19

-20

December 2020

25% 44%

-14

23% 43%

-17

November 2021

28% 42%

Climate Change

GOP Dem

25% 42%
Democrats are also thought to do a better job handling energy policy and energy infrastructure.

“Now please read the list of issues below and indicate which party you think would do a better job the Democratic Party, the Republican Party, or both about the same? If you think that neither would do a good job, please indicate that below.”

-6

Democrats are also thought to do a better job handling energy policy and energy infrastructure.
Clean Energy
A large majority support the government taking action to accelerate clean energy in the U.S.

“And, would you say you support or oppose the government taking action to accelerate the development and use of clean energy in the United States?”

*Denotes Rounding.
Republicans, Independents, and Democrats all agree. There is nearly unanimous agreement among Dems.

Government Action on Clean Energy Trend by Party

<table>
<thead>
<tr>
<th>Total GOP (39%)</th>
<th>Ind (18%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>76% 67% 61% 86% 72% 67%</td>
<td>80% 76% 81% 91% 86% 89%</td>
</tr>
<tr>
<td>20% 29% 37% 14% 28% 33%</td>
<td>15% 20% 16% 9% 14% 11%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total Dem (43%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>96% 95% 95% 91% 95% 97%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Support</th>
<th>Oppose</th>
</tr>
</thead>
<tbody>
<tr>
<td>2% 4% 4% 9% 5% 3%</td>
<td></td>
</tr>
</tbody>
</table>

There is nearly unanimous agreement among Dems.
Large majorities of all age groups are in support of the government taking action for clean energy.

Government Action on Clean Energy Trend by Age

**Age 18-34 (33%)**

Support: 92% 89% 89% 93% 92% 89%
Oppose: 7% 11% 11% 7% 8% 11%

**Age 45-54 (11%)**

Support: 78% 81% 73% 87% 85% 78%
Oppose: 19% 17% 26% 13% 15% 22%

**Age 55-64 (10%)**

Support: 81% 79% 80% 84% 81% 82%
Oppose: 14% 18% 18% 16% 19% 18%

**Age 65+ (26%)**

Support: 85% 77% 74% 91% 80% 79%
Oppose: 11% 19% 22% 9% 20% 21%
There is majority support for competition that allows markets and businesses to provide more clean energy.

“To increase clean energy production, would you prefer...”

<table>
<thead>
<tr>
<th>December 2020</th>
<th>November 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approaches like competition that allow markets and businesses to provide more clean energy production</td>
<td>65%</td>
</tr>
<tr>
<td>Government mandates, subsidies, and quotas</td>
<td>20%</td>
</tr>
<tr>
<td>A price or tax put on carbon emissions</td>
<td>15%</td>
</tr>
</tbody>
</table>
There is support for competition across partisan lines. A tax on emissions is a non-starter across party lines.

### Increase Clean Energy Production by Party

<table>
<thead>
<tr>
<th></th>
<th>Overall</th>
<th>Total GOP (39%)</th>
<th>Ind (18%)</th>
<th>Total Dem (43%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competition</td>
<td>65%</td>
<td>81%</td>
<td>66%</td>
<td>52%</td>
</tr>
<tr>
<td>Government Mandates</td>
<td>20%</td>
<td>10%</td>
<td>19%</td>
<td>29%</td>
</tr>
<tr>
<td>Tax On Emissions</td>
<td>15%</td>
<td>9%</td>
<td>15%</td>
<td>19%</td>
</tr>
</tbody>
</table>
Voters say it is important that a candidate for political office share their opinion on clean energy issues.

“And, how important is it to you that a candidate for political office share your opinion on clean energy issues? Is it...”

*Denotes Rounding.
Nearly all Dems say it is important for the candidate to share their opinion. A solid majority of GOPers say it is important, too.

**Clean Energy Importance Vote Trend by Party**

- **Total GOP (39%)**
  - 2/18: 75%
  - 11/18: 59%
  - 11/19: 78%
  - 10/20: 68%
  - 12/20: 51%
  - 11/21: 68%

- **Ind (18%)**
  - 2/18: 19%
  - 11/18: 25%
  - 11/19: 17%
  - 10/20: 26%
  - 12/20: 25%
  - 11/21: 23%

- **Total Dem (43%)**
  - 2/18: 94%
  - 11/18: 91%
  - 11/19: 97%
  - 10/20: 91%
  - 12/20: 91%
  - 11/21: 93%

- **Not Important**
  - 2/18: 6%
  - 11/18: 9%
  - 11/19: 3%
  - 10/20: 9%
  - 12/20: 9%
  - 11/21: 7%

[Important](#) [Not Important](#)
Most voters say they would vote for an elected official who supports clean energy development.

“Still thinking about clean energy... Thinking ahead to future elections... would you vote for or against elected officials or candidates who support clean energy development like solar and wind, or would it make no difference to your vote?”

*Denotes Rounding.

Clean Energy National Online Survey – November 18-21, 2021
Republicans are the most hesitant to vote for a candidate who supports clean energy.

Would Vote for Candidates Who Support Clean Energy Trend by Party

**Total GOP (39%)**

- 11/18: 64%
- 11/19: 59%
- 10/20: 55%
- 12/20: 45%
- 11/21: 53%

**Ind (18%)**

- 11/18: 74%
- 11/19: 79%
- 10/20: 64%
- 12/20: 67%
- 11/21: 69%

**Total Dem (43%)**

- 11/18: 97%
- 11/19: 98%
- 10/20: 81%
- 12/20: 89%
- 11/21: 87%

For
Against

11/18 11/19 10/20 12/20 11/21
A majority of voters now say they are likely to consider purchasing an electric vehicle when they make their next purchase.

“When you make your next vehicle purchase, how likely are you to consider purchasing an electric vehicle...”

*Denotes Rounding.

*Likely  |  Not Likely  |  Very Likely  |  Not At All Likely

- 10/20: 52%* | 48%* | 28% | 17%
- 12/20: 55%* | 45% | 31% | 15%
- 11/21: 55%* | 45% | 23% | 22%
A plurality of those who are likely to buy an electric vehicle say they would consider it in two to three years.

“When would you consider buying an electric vehicle?”*^  

18% Two to three years  

13% Within a year  

13% Three to five years  

11% When I purchase my next car

*^Among “Likely” Respondents, N=546, Results Shown Off Total Base.
There is solid support for prioritizing nuclear energy as part of the country’s clean energy mix.

“There thinking again about nuclear energy… Please read the following statement and indicate whether you agree or disagree with that statement: Nuclear energy should be prioritized as part of the country’s clean energy mix.”

*Denotes Rounding.
Climate Change
Large majorities of voters favor the government taking steps to reduce emissions of gasses that cause global climate change.

“And, do you favor or oppose the government taking steps to reduce emissions of gases like carbon dioxide and methane emissions that cause global climate change?”

*Denotes Rounding.
Support for government action to reduce emissions has increased among GOPers and Inds.

Government Action on Reduced Emissions Trend by Party

**Total GOP (39%)**
- 11/18: 48%
- 11/19: 53%
- 10/20: 76%
- 12/20: 59%
- 11/21: 66%

**Ind (18%)**
- 11/18: 68%
- 11/19: 76%
- 10/20: 82%
- 12/20: 80%
- 11/21: 88%

**Total Dem (43%)**
- 11/18: 91%
- 11/19: 91%
- 10/20: 94%
- 12/20: 95%
- 11/21: 95%

**Favor**
- 11/18: 8%
- 11/19: 8%
- 10/20: 6%
- 12/20: 5%
- 11/21: 5%

**Oppose**
- 11/18: 8%
- 11/19: 8%
- 10/20: 6%
- 12/20: 5%
- 11/21: 5%
Younger voters are most supportive, but majorities of older voters still favor government action to reduce emissions.

**Government Action on Reduced Emissions Trend by Age**

**Age 18-34 (33%)**
- Favor: 79% (11/18) to 88% (10/20) to 86% (12/20) to 88% (11/21)
- Oppose: 21% (11/18) to 18% (11/19) to 12% (10/20) to 14% (12/20) to 12% (11/21)

**Age 35-44 (21%)**
- Favor: 72% (11/18) to 73% (11/19) to 90% (10/20) to 87% (12/20) to 85% (11/21)
- Oppose: 24% (11/18) to 25% (11/19) to 10% (10/20) to 13% (12/20) to 15% (11/21)

**Age 45-54 (11%)**
- Favor: 66% (11/18) to 67% (11/19) to 86% (10/20) to 74% (12/20) to 79% (11/21)
- Oppose: 34% (11/18) to 31% (11/19) to 14% (10/20) to 26% (12/20) to 21% (11/21)

**Age 55-64 (10%)**
- Favor: 70% (11/18) to 68% (11/19) to 81% (10/20) to 72% (12/20) to 75% (11/21)
- Oppose: 29% (11/18) to 30% (11/19) to 19% (10/20) to 28% (12/20) to 25% (11/21)

**Age 65+ (26%)**
- Favor: 67% (11/18) to 67% (11/19) to 82% (10/20) to 73% (12/20) to 79% (11/21)
- Oppose: 30% (11/18) to 30% (11/19) to 18% (10/20) to 27% (12/20) to 21% (11/21)
A plurality of registered voters believe climate change is an extreme threat.

“Continuing to think about climate change... Please read the following statements about the impact of climate change on society, and after you read each one, please indicate which statement is closest to your own opinion...”

<table>
<thead>
<tr>
<th>December 2020</th>
<th>November 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>39%</td>
<td>45%</td>
</tr>
<tr>
<td>29%</td>
<td>31%</td>
</tr>
<tr>
<td>21%</td>
<td>14%</td>
</tr>
<tr>
<td>12%</td>
<td>10%</td>
</tr>
</tbody>
</table>
To deal with climate change, voters say more effort should be put into research/development and improving market structures.

“Assuming climate change is caused by humans, which do you think is the best way to deal with the issue…”

<table>
<thead>
<tr>
<th>December 2020</th>
<th>November 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>23%</td>
<td>24%</td>
</tr>
<tr>
<td>22%</td>
<td>16%</td>
</tr>
<tr>
<td>11%</td>
<td>11%</td>
</tr>
<tr>
<td>10%</td>
<td>11%</td>
</tr>
<tr>
<td>7%</td>
<td>6%</td>
</tr>
<tr>
<td>27%</td>
<td>32%</td>
</tr>
</tbody>
</table>

- Putting more efforts into Research, Development, and Innovation of clean energy sources
- Improving market structure and incentives to allow clean energy technologies to more fairly compete
- Increased regulations to force businesses to comply with carbon emission standards
- Phasing out the use of fossil fuels such as coal, oil, and gas
- Joining international agreements such as the Paris Climate Accord

...or...

All of the above
A sizable majority of voters would be more likely to support a GOP candidate who embraces new tech in addressing climate change.

“Would you be more likely or less likely to support a Republican candidate who embraces new technologies and innovation in addressing climate change?”

![Graph showing survey results]

*Denotes Rounding; **Language prior to 2021: “Would you be more likely or less likely to support a Republican candidate who embraces an innovation-based approach to addressing climate change?”
Top Groups – More Likely to Support GOP Candidate

**Top Groups – More Likely (73%)**

<table>
<thead>
<tr>
<th>Group</th>
<th>Likelihood</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mod/Lib GOP</td>
<td>92%</td>
</tr>
<tr>
<td>Farm Belt Region</td>
<td>86%</td>
</tr>
<tr>
<td>Mod GOP/Ind</td>
<td>85%</td>
</tr>
<tr>
<td>GOP Women</td>
<td>84%</td>
</tr>
<tr>
<td>Men 18-34</td>
<td>83%</td>
</tr>
<tr>
<td>Soft/Lean GOP</td>
<td>82%</td>
</tr>
<tr>
<td>Total GOP</td>
<td>81%</td>
</tr>
<tr>
<td>Age 18-34</td>
<td>81%</td>
</tr>
<tr>
<td>Base GOP</td>
<td>79%</td>
</tr>
<tr>
<td>Women 18-34</td>
<td>79%</td>
</tr>
<tr>
<td>Ind Women</td>
<td>79%</td>
</tr>
<tr>
<td>White Mod</td>
<td>79%</td>
</tr>
<tr>
<td>Mountain Region</td>
<td>79%</td>
</tr>
<tr>
<td>Women 35-54</td>
<td>78%</td>
</tr>
<tr>
<td>White Women</td>
<td>77%</td>
</tr>
<tr>
<td>GOP Men</td>
<td>77%</td>
</tr>
<tr>
<td>Somewhat Conservative</td>
<td>77%</td>
</tr>
<tr>
<td>Moderate</td>
<td>77%</td>
</tr>
<tr>
<td>Ind</td>
<td>76%</td>
</tr>
<tr>
<td>Men w/o Degree</td>
<td>76%</td>
</tr>
<tr>
<td>Outer South Region</td>
<td>76%</td>
</tr>
</tbody>
</table>
Many would be more favorable to Congressional GOPers if they embraced a conservative approach to clean energy.

“Would your view of Congressional Republicans be more favorable or less favorable if they embraced a conservative approach to encouraging clean energy?”

*Denotes Rounding; ^Language prior to 2021: “Would your view of Congressional Republicans be more favorable or less favorable if they embraced a conservative approach to addressing clean energy by prioritizing technology innovation and competition?”
Republicans especially would favor Congressional GOPers taking a conservative approach to clean energy.

Embrace Conservative Approach to Clean Energy/Climate Change by Party

<table>
<thead>
<tr>
<th>Party</th>
<th>Total GOP (39%)</th>
<th>Ind (18%)</th>
<th>Total Dem (43%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>More Favorable</td>
<td>81%</td>
<td>68%</td>
<td>69%</td>
</tr>
<tr>
<td>Less Favorable</td>
<td>19%</td>
<td>32%</td>
<td>31%</td>
</tr>
</tbody>
</table>

+62 +36 +38
Younger voters are more likely to favor Congressional GOPers taking this approach. Older voters also support it.

*Embrace Conservative Approach to Clean Energy/Climate Change by Gender/Age*

+68  
84%  
16%  
Men 18-34 (14%)

+58  
79%  
21%  
Men 35-54 (15%)

+22  
61%  
39%  
Men 55+ (19%)

+60  
80%  
20%  
Women 18-34 (19%)

+56  
78%  
22%  
Women 35-54 (17%)

+26  
63%  
37%  
Women 55+ (16%)

More Favorable  
Less Favorable
A strong majority of voters would be more likely to support a candidate who believes human activity affects climate change.

“Are you more likely or less likely to support a candidate for public office who believes human activity is contributing to climate change?”

*Denotes Rounding.
A growing number of Republicans would be more likely to support such a candidate.

Climate Change Candidate Trend by Party

Total GOP (39%)

<table>
<thead>
<tr>
<th>Date</th>
<th>More Likely</th>
<th>Less Likely</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/18</td>
<td>57%</td>
<td>34%</td>
</tr>
<tr>
<td>11/19</td>
<td>63%</td>
<td>24%</td>
</tr>
<tr>
<td>10/20</td>
<td>63%</td>
<td>37%</td>
</tr>
<tr>
<td>12/20</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>11/21</td>
<td>60%</td>
<td>40%</td>
</tr>
</tbody>
</table>

Ind (18%)

<table>
<thead>
<tr>
<th>Date</th>
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<th>Less Likely</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/18</td>
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<tr>
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<td>29%</td>
</tr>
<tr>
<td>11/21</td>
<td>77%</td>
<td>23%</td>
</tr>
</tbody>
</table>

Total Dem (43%)

<table>
<thead>
<tr>
<th>Date</th>
<th>More Likely</th>
<th>Less Likely</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/18</td>
<td>89%</td>
<td>9%</td>
</tr>
<tr>
<td>11/19</td>
<td>91%</td>
<td>6%</td>
</tr>
<tr>
<td>10/20</td>
<td>90%</td>
<td>10%</td>
</tr>
<tr>
<td>12/20</td>
<td>93%</td>
<td>7%</td>
</tr>
<tr>
<td>11/21</td>
<td>91%</td>
<td>9%</td>
</tr>
</tbody>
</table>

More Likely: blue line
Less Likely: red line
One third of voters believe America should hold other large greenhouse gas emitters accountable.

“When it comes to America entering international accords on climate change, what should be the top issues addressed?”

- **34%**
  - Holding other large greenhouse gas emitters like Russia and China accountable

- **27%**
  - Re-negotiating tariffs to prioritize cleaner American energy production

- **22%**
  - America should not be entering international accords on climate change

- **17%**
  - Opening trade access to send U.S. produced energy to poorer nations
Holding other large greenhouse gas emitters accountable is a top issue across partisan lines.

*Top Issues in International Accords by Party*
Clean Energy Policy Proposals
Increasing research and development funding is the top clean energy policy proposal, followed by community solar projects.

“Now, please read the following list of policies that supporters have proposed to help expand your state’s commitment to clean energy. After you read each one, please indicate whether you favor or oppose that policy.”

Ranked by % Strongly Favor

- **Increasing research and development funding for clean energy solutions including electric storage.**
  - Strongly Favor: 50% (89%)
  - Strongly Oppose: 5% (11%)

- **Community solar projects that enable consumers to share the benefits and save money on our bills.**
  - Strongly Favor: 49% (86%)
  - Strongly Oppose: 11% (14%)

- **Energy efficiency upgrades to reduce the amount of power we need to generate and purchase.**
  - Strongly Favor: 47% (89%)
  - Strongly Oppose: 11% (11%)

- **Allow more electric utility competition which would give people the choice of what companies to buy their power from.**
  - Strongly Favor: 45% (86%)
  - Strongly Oppose: 11% (14%)
Cutting regulations and red tape and increasing government funding for the electricity grid are the least popular proposals.

“Now, please read the following list of policies that supporters have proposed to help expand your state’s commitment to clean energy. After you read each one, please indicate whether you favor or oppose that policy.”

Ranked by % Strongly Favor

- **Tax credits for advancing clean energy.**
  - Strongly Favor: 40%
  - Total Favor: 82%
  - Strongly Oppose: 6%
  - Total Oppose: 18%

- **Increase government spending to modernize America’s electricity grid.**
  - Strongly Favor: 40%
  - Total Favor: 78%
  - Strongly Oppose: 7%
  - Total Oppose: 22%

- **Cutting regulations and red tape that slow the development of clean energy resources.**
  - Strongly Favor: 39%
  - Total Favor: 83%
  - Strongly Oppose: 6%
  - Total Oppose: 17%
Voters would rather increase and accelerate development of clean energy rather than impose a carbon tax.

“Now, please read the following list of proposals that have been put forth to help expand clean energy in the United States. After you read each one, please indicate whether you support or oppose that proposal.”

Ranked by % Strongly Support

Increasing and accelerating development of the country’s clean energy infrastructure.

- Strongly Support: 49%
- Total Support: 85%
- Strongly Oppose: 5%
- Total Oppose: 15%

Creating a carbon tax by penalizing businesses and industries who emit high levels of CO2 with higher taxes to incentivize cleaner operations.

- Strongly Support: 36%
- Total Support: 72%
- Strongly Oppose: 13%
- Total Oppose: 28%

*Denotes Rounding.
Nearly half of all respondents say it is very important to protect property owners’ rights to develop renewable energy.

“Now, please read the policy below that supporters have proposed to help expand our state’s commitment to clean energy. After you read it, please indicate whether you think the policy is... very important, somewhat important, not too important, or not at all important.”

Ranked by % Very Important

Protecting property owners’ rights to develop renewable energy on their own lands as they best see fit.

*Denotes Rounding.
Message Testing
Some people say that many owners of electric vehicles are wealthy and they should not be exempt from paying gas taxes that subsidize the cost of charging stations for their cars or without having to pay into the maintenance for the roads and highways they also use. There should be a tax for electric vehicles so owners of these are paying their fair share to fund our roads, highways, and the charging stations for their automobiles.

...while...

Other people say that owners of electric vehicles pay more for those automobiles because they are more costly to begin with, and they are also helping the environment by not using fossil fuels that create emissions, and therefore owners of electric vehicles should not be subject to special taxes but encouraged to drive them. People who buy electric vehicles are helping lead the nation’s transition from gas-powered cars and are taking on risks by spending on this new technology. They should be credited, not punished.
A solid majority of voters think net metering is fair.

“Changing topics slightly... Most states have a policy called net metering that allows homeowners, businesses, local school districts, and other organizations to get full retail credit for the extra energy their rooftop solar panels produce. This extra solar energy goes onto the electricity grid for the utility company to sell at the full retail rate to other customers. Please read the following two statements about this, and please indicate which one comes closer to your own point of view.”

60%

Some people say net metering is fair because it encourages the development of solar resources, and other customers benefit from the extra solar energy that goes onto the electricity grid.

...while...

40%

Other people say net metering is unfair because solar customers use the electricity grid, too, and need to pay a fair rate for their use. They say that otherwise, solar customers’ use of the electricity grid becomes subsidized by non-solar customers.
Nearly three quarters of respondents are supportive of renewable wind and solar projects in rural areas.

“Renewable energy development is becoming increasingly common in rural landscapes across the country. Most of them are utility scale projects of wind and solar. Now, please read the following two statements and after you read each one, please indicate which statement comes closest to your own opinion...”

73%

Supporters of renewable wind and solar projects in rural areas say those projects are good because they boost local tax revenues, create jobs, result in additional income for rural farmers, helping them to survive financially, and maintain their farm operations.

27%

Opponents of renewable wind and solar projects in rural areas say those projects are bad because they ruin beautiful views, kill birds, and take some good farmland out of production.
Voters would prefer a more recent system that allows for consumer choice and change that can bring benefits.

“Now, please read two additional options about purchasing electricity, and please indicate which one you prefer.”

82% of voters would prefer a more recent system that allows people to have a choice from whom they purchase electricity and what kind of electricity they consume, such as clean energy.

18% prefer the traditional system, in which nearly everyone purchases their electricity from one monopoly utility.

76% prefer America can develop a more modern electricity system that benefits the environment, accelerates the availability of new technology, and creates more choices by opening up markets to competition, giving consumers more choices instead of just their monopoly utility.

24% prefer the current electricity monopoly system works fine as it is, and change will only end up creating confusion, reducing reliability, and resulting in higher costs for consumers.

^Split Sample A, N=501; ^*Split Sample B, N=499.
Voters agree most with allowing clean energy companies access to the same financing as traditional energy companies.

“Thinking again about clean energy... Please read the following statements about why some people want to accelerate the growth of clean energy, by speeding up the development of sources of renewable energy like wind and solar power. After you read each statement, please indicate whether you agree or disagree with that statement.”

**Ranked by % Strongly Agree**

- **We should allow clean energy companies access to the same financing options available to traditional energy companies in order to attract investments for new, clean technologies.**
  - Strongly Agree: 45%
  - Total Agree: 89%
  - Strongly Disagree: 11%

- **We should accelerate the growth of clean energy so that we can more quickly make the inevitable transition away from carbon-emitting sources of energy like coal.**
  - Strongly Agree: 45%
  - Total Agree: 82%
  - Strongly Disagree: 5%
  - Total Disagree: 18%

- **We should accelerate the growth of clean energy so that we can decentralize our nation’s electricity sources, protecting them from prolonged outages due to extreme weather or security threats.**
  - Strongly Agree: 44%
  - Total Agree: 83%
  - Strongly Disagree: 5%
  - Total Disagree: 17%

- **We should accelerate the growth of clean energy so that our state can be a national leader in the competition for economic development and good-paying jobs.**
  - Strongly Agree: 43%
  - Total Agree: 83%
  - Strongly Disagree: 5%
  - Total Disagree: 17%

- **We should increase state government funding for basic research into clean energy technology without picking winners and losers, supporting efforts to reach new energy frontiers.**
  - Strongly Agree: 39%
  - Total Agree: 79%
  - Strongly Disagree: 7%
  - Total Disagree: 21%

*Denotes Rounding.*
The informed ballot does not change significantly from the initial ballot.

“And now that you have heard some more information, do you support or oppose the government taking action to accelerate the development and use of clean energy in the United States?”

**Initial**
- Total Support: 84%*
- Total Oppose: 16%

**Informed**
- Total Support: 83%*
- Total Oppose: 17%

*Denotes Rounding.
A majority of respondents would support America increasing its domestic supply chain.

“Recent global supply chain issues have resulted in higher energy prices and less available supply. With this economic reality in mind would you...”

**Ranked by % Strongly Support**

Support America increasing its domestic supply chain to ensure components important to clean energy development are made in America.

- **Strongly Support:** 50%
- **Total Support:** 91%
- **Strongly Oppose:** 9%
- **Total Oppose:**

Support America increasing domestic mining operations to develop its own supply chain of rare earth minerals necessary for clean energy solutions like windmills, solar panels, and electric vehicle batteries.

- **Strongly Support:** 41%
- **Total Support:** 84%
- **Strongly Oppose:** 16%
- **Total Oppose:**

Support America increasing its domestic production of oil and gas.

- **Strongly Support:** 35%
- **Total Support:** 69%*
- **Strongly Oppose:** 11%
- **Total Oppose:** 31%

*Denotes Rounding.
Glen Bolger
Glen@pos.org

For more information about this presentation or about Public Opinion Strategies, please give us a call.

214 N. Fayette St.
Alexandria, Virginia 22314
(703) 836-7655 - Phone
www.pos.org