Public discourse on energy and climate increasingly includes nuclear energy, but how has that affected public opinion? The answer: a lot. A national public opinion survey in May 2021 found that support for nuclear energy has rebounded, and now Biden and Trump voters support nuclear energy about equally. Trump voters care more about affordable and reliable electricity. Biden voters care more about climate change. Support is driven by perception of need. Perception of need is boosted by climate change, recent energy supply problems, and Democratic leadership endorsements. The importance of Democratic leadership endorsements is shown in the Obama bump in 2010 and the Biden bump in 2021. In both cases, the increase in support overall was largely due to change among Democrats.

The survey, with 1,000 nationally representative US adults has a margin of error of plus or minus three percentage points and was conducted by Bisconti Research, Inc with Quest Global Research Mindshare Online Panel. The report includes trend data going back 38 years.

**Support for Nuclear Energy**
Seventy-six percent said they strongly or somewhat favored the use of nuclear energy as one of the ways to provide electricity in the United States; 24 percent opposed. The previous peak was in 2010, when 74 percent favored nuclear energy and 23 percent opposed. In the interim, favorability had plateaued in the 60 percent range. Now, 32 percent strongly favor nuclear energy, and six percent are strongly opposed.

**Favorability to Nuclear Energy 1983-2021**
Overall, do you strongly favor, somewhat favor, somewhat oppose, or strongly oppose the use of nuclear energy as one of the ways to provide electricity in the United States? (%)

<table>
<thead>
<tr>
<th>Year</th>
<th>% Favor</th>
<th>% Oppose</th>
</tr>
</thead>
<tbody>
<tr>
<td>1983</td>
<td>49</td>
<td>51</td>
</tr>
<tr>
<td>1984</td>
<td>46</td>
<td>54</td>
</tr>
<tr>
<td>1985</td>
<td>47</td>
<td>53</td>
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<td>1986</td>
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<td>1987</td>
<td>49</td>
<td>51</td>
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<td>1988</td>
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<td>1994</td>
<td>56</td>
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<td>1995</td>
<td>57</td>
<td>43</td>
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<td>1996</td>
<td>58</td>
<td>42</td>
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<tr>
<td>1997</td>
<td>59</td>
<td>41</td>
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<tr>
<td>1998</td>
<td>60</td>
<td>40</td>
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<td>2007</td>
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<td>2008</td>
<td>60</td>
<td>40</td>
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<tr>
<td>2009</td>
<td>60</td>
<td>40</td>
</tr>
<tr>
<td>2010</td>
<td>74</td>
<td>26</td>
</tr>
<tr>
<td>2011</td>
<td>68</td>
<td>32</td>
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<tr>
<td>2012</td>
<td>67</td>
<td>33</td>
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<tr>
<td>2013</td>
<td>66</td>
<td>34</td>
</tr>
<tr>
<td>2014</td>
<td>65</td>
<td>35</td>
</tr>
<tr>
<td>2015</td>
<td>64</td>
<td>36</td>
</tr>
<tr>
<td>2016</td>
<td>63</td>
<td>37</td>
</tr>
<tr>
<td>2017</td>
<td>62</td>
<td>38</td>
</tr>
<tr>
<td>2018</td>
<td>61</td>
<td>39</td>
</tr>
<tr>
<td>2019</td>
<td>60</td>
<td>40</td>
</tr>
<tr>
<td>2020</td>
<td>59</td>
<td>41</td>
</tr>
<tr>
<td>2021</td>
<td>67</td>
<td>33</td>
</tr>
</tbody>
</table>
Most Americans (83 percent) believe that nuclear energy will be important in meeting the nation’s electricity needs in the years ahead. The survey also found support for license renewal and new plants: 86 percent agreed that we should renew the license of nuclear power plants that continue to meet federal safety standards, 85 percent agreed that our nation should prepare now so that advanced design nuclear power plants will be available to provide electricity, and 69 percent agreed we should definitely build more nuclear power plants in the future.

**Perception Challenges**

Improvements were measured on two perception challenges: perception of nuclear power plant safety and perception of public opinion. For the first time since the Fukushima tsunami, perceptions of nuclear power plant safety have taken a significant turn back up. Compared with 2020, high safety ratings increased from 47 percent to 57 percent and low safety ratings decreased from 23 percent to 19 percent. Perceptions of safety of nuclear power plants have historically been influenced by perceptions of need for nuclear energy.

Also, perceptions of public opinion historically have been much less favorable than actual public opinion. That “perception gap” pointed to an image challenge. Surveys from 2019-2021 have found that the perception gap is changing. There is still a wide difference between individuals’ support and their perceptions of others’ opinions on nuclear energy. However, for the past three years, more people say that the public favors nuclear energy than say it is opposed.

**Vanishing Perception Gap?**

**Perception of Public Opinion More Favorable Now**

*Overall, do you strongly favor, somewhat favor, somewhat oppose, or strongly oppose the use of nuclear energy as one of the ways to provide electricity in the United States?*

*Do you think that the majority of people in your community favor or oppose the use of nuclear energy? (%)*

<table>
<thead>
<tr>
<th>Personally Favor Nuclear Energy</th>
<th>Think Majority of Public Favors Nuclear Energy</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016  65  2016  44</td>
<td>2016  61  2016  53</td>
</tr>
<tr>
<td>2020  60  2020  53</td>
<td>2020  61  2020  53</td>
</tr>
<tr>
<td>2021  76  2021  61</td>
<td>2021  76  2021  61</td>
</tr>
</tbody>
</table>
Communications Insights
Public opinion on nuclear energy is highly changeable. Most members of the public have never held a strong opinion pro or con nuclear energy. In May 2021, 32 percent strongly favored nuclear energy and 6 percent strongly opposed. The remaining 62 percent can be considered fence-sitters. More women than men are fence-sitters: in May 2021, just 21 percent of women strongly favored nuclear energy and 8 percent strongly opposed. Among men, 45 percent strongly favored nuclear energy and 2 percent strongly opposed.

Few people feel very well informed about the topic. In May 2021, only 19 percent felt very well informed, including 27 percent of men and 12 percent of women. Also notable is the large generational difference, with Millennials feeling best informed about the subject. Fewer than 10 percent of the two older generations, Silent and Boomers, said they feel very well informed, compared with 16 percent of Gen Xers, 31 percent of Millennials, and 21 percent of Gen Z.

The more informed people feel about nuclear energy, the more they favor it. In 2021, of those who felt very well informed about nuclear energy, 78 percent strongly favored it—and only 3 percent strongly opposed. If feeling very well informed is a likely prerequisite to activism, one can understand why antinuclear activism has come from a very small group of people. The small segment of the population that feels very well informed and strongly opposed to nuclear energy exerts an outsized influence on perceptions of public opinion.

The More Informed People Feel, the More Favorable
How well informed do you feel about nuclear energy used to produce electricity?
Overall, do you strongly favor, somewhat favor, somewhat oppose, or strongly oppose the use of nuclear energy as one of the ways to provide electricity in the United States?

<table>
<thead>
<tr>
<th>Feel Very Well Informed</th>
<th>Feel Somewhat Informed</th>
<th>Feel Not Too Informed</th>
<th>Feel Not At All Informed</th>
</tr>
</thead>
<tbody>
<tr>
<td>(186) %</td>
<td>(364) %</td>
<td>(346) %</td>
<td>(104) %</td>
</tr>
<tr>
<td>Strongly favor</td>
<td>78</td>
<td>47</td>
<td>26</td>
</tr>
<tr>
<td>Somewhat favor</td>
<td>16</td>
<td>15</td>
<td>26</td>
</tr>
<tr>
<td>Somewhat oppose</td>
<td>15</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Strongly oppose</td>
<td>3</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
For communications, it is wise to focus on what the public values most. In this survey, respondents were asked about the importance to them of nine considerations for the way electricity is produced. They were not told that these considerations are all benefits of nuclear energy. First, they rated the considerations. All were rated extremely or very important. Second, they selected the two considerations that are most important to them. As in previous surveys, the top three considerations are affordable electricity, reliable electricity, and clean air. In this survey, climate change solution tied with clean air when respondents picked the two most important considerations. These considerations surpassed efficiency, economic growth, job creation, energy security, and resilience.

### Most Important Considerations for Electricity Production

*Select the two considerations for the way electricity is produced that are most important to you. (%)*

<table>
<thead>
<tr>
<th>Consideration</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affordable electricity</td>
<td>47</td>
</tr>
<tr>
<td>Reliable electricity</td>
<td>38</td>
</tr>
<tr>
<td>Clean air</td>
<td>25</td>
</tr>
<tr>
<td>Climate change solution</td>
<td>25</td>
</tr>
<tr>
<td>Efficiency</td>
<td>18</td>
</tr>
<tr>
<td>Economic growth</td>
<td>17</td>
</tr>
<tr>
<td>Job creation</td>
<td>14</td>
</tr>
<tr>
<td>Energy security</td>
<td>13</td>
</tr>
<tr>
<td>Resilience</td>
<td>4</td>
</tr>
</tbody>
</table>

For information on nuclear energy, the public trusts experts in the field. Most credible are a safety engineer at a nuclear power plant in your area, a scientist at a U.S. government national laboratory who is developing advanced-design nuclear energy, the U.S. Nuclear Regulatory Commission, and a university professor of nuclear science. Least credible are an antinuclear organization, Congress, and the news media. **See graph on next page.**
Credibility of Sources: Experts Trusted Most

In your opinion, would each of the following be an excellent, good, fair, or poor source for accurate information on nuclear energy? (%)

<table>
<thead>
<tr>
<th>Source</th>
<th>Excellent</th>
<th>Good</th>
<th>Fair</th>
<th>Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>A safety engineer at a nuclear power plant in your area</td>
<td>37</td>
<td>42</td>
<td>17</td>
<td>4</td>
</tr>
<tr>
<td>A scientist at a U.S. government national laboratory who is developing advanced-technology nuclear energy</td>
<td>37</td>
<td>42</td>
<td>17</td>
<td>5</td>
</tr>
<tr>
<td>The U.S. Nuclear Regulatory Commission</td>
<td>34</td>
<td>45</td>
<td>16</td>
<td>5</td>
</tr>
<tr>
<td>A university professor of nuclear science</td>
<td>34</td>
<td>43</td>
<td>20</td>
<td>4</td>
</tr>
<tr>
<td>The U.S. Department of Energy</td>
<td>28</td>
<td>49</td>
<td>18</td>
<td>6</td>
</tr>
<tr>
<td>An environmentalist</td>
<td>22</td>
<td>36</td>
<td>26</td>
<td>16</td>
</tr>
<tr>
<td>The Internet</td>
<td>18</td>
<td>26</td>
<td>33</td>
<td>23</td>
</tr>
<tr>
<td>An antinuclear organization</td>
<td>14</td>
<td>27</td>
<td>24</td>
<td>35</td>
</tr>
<tr>
<td>Congress</td>
<td>14</td>
<td>24</td>
<td>33</td>
<td>29</td>
</tr>
<tr>
<td>The news media</td>
<td>14</td>
<td>24</td>
<td>30</td>
<td>32</td>
</tr>
</tbody>
</table>

Information Impact

Information has a large impact on attitudes toward nuclear energy, as this survey proved once again. Information impact was measured in two ways at the end of the interview—after questions about attitudes. First, the survey tested the impact of a statement. Respondents were asked about how much they perceived nuclear energy as a reliable energy source and a clean air energy source. They were then shown this statement and asked how it affected their opinion of nuclear energy: “In fact, nuclear energy is America’s largest and most reliable clean-air energy source. Nuclear energy already produces more than half the zero-emission electricity in the United States, and it produces electricity reliably 24 hours a day.” Two-thirds of respondents (65 percent) said this statement made them more favorable to nuclear energy; they include 71 percent of Biden voters and 64 percent of Trump voters.

Impact of Statement:

“Nuclear Energy is America’s Largest and Most Reliable Clean Air Energy Source…”

Statement: In fact, nuclear energy is America’s largest and most reliable clean-air energy source. Nuclear energy already produces more than half the zero-emission electricity in the United States, and it produces electricity reliably 24 hours a day. How does this fact affect your opinion of nuclear energy? (%)

More favorable: 65
Less favorable: 9
No difference: 26
Second, the survey asked respondents to rate the importance of seven “environmental advantages of current or future nuclear power plants.” They then selected the two most important advantages, with clean air and clean drinking water their top picks.

**Most Important “Environmental Advantages of Current or Future Nuclear Power Plants”**

*Select the two environmental advantages of current or future nuclear power plants that are most important, in your opinion. (%)*

<table>
<thead>
<tr>
<th>Advantage</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clean air—they emit no air pollution.</td>
<td>51</td>
</tr>
<tr>
<td>Clean drinking water—in addition to making electricity, they can convert seawater into safe drinking water</td>
<td>43</td>
</tr>
<tr>
<td>Preservation of natural resources—they use far less land than any other energy source for 24/7 energy.</td>
<td>29</td>
</tr>
<tr>
<td>Enabler of renewable energy—they can be co-located with renewable energy sources in flexible integrated energy systems to ensure reliable electricity, when the sun...</td>
<td>28</td>
</tr>
<tr>
<td>Waste reduction—advanced reactor technologies minimize waste, and some use it as fuel.</td>
<td>23</td>
</tr>
<tr>
<td>Hydrogen production for transportation and industrial uses—they can be used to produce hydrogen as another zero-emission option for future vehicles and industrial uses.</td>
<td>14</td>
</tr>
<tr>
<td>Electric vehicles—nuclear power plants make zero-emission electricity for America's expanding electric vehicle use.</td>
<td>13</td>
</tr>
</tbody>
</table>

Following this information, the same favorability question that had been asked at the beginning of the survey was repeated. Those favoring nuclear energy increased to 88 percent. Those strongly in favor increased from 32 percent to 42 percent. Of those who initially opposed nuclear energy, more than half shifted to favor. **See graph on next page.**

**Conclusion**

The attitude bump found in this survey could be expected, based on the importance given these days to reaching zero-carbon goals and the inclusion of nuclear energy in conversations about solutions. The dramatic shifts in opinion that resulted from the provision of information at the end of the survey show that the magnitude of nuclear energy’s clean air role is not yet well known.
Favorability to Nuclear Energy
Before and After Information

Overall, do you strongly favor, somewhat favor, somewhat oppose, or strongly oppose the use of nuclear energy as one of the ways to provide electricity in the United States? (%)

<table>
<thead>
<tr>
<th></th>
<th>Before—Start of Survey</th>
<th></th>
<th>After—End of Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FAVOR</strong></td>
<td>76</td>
<td><strong>FAVOR</strong></td>
<td>88</td>
</tr>
<tr>
<td><strong>OPPOSE</strong></td>
<td>24</td>
<td><strong>OPPOSE</strong></td>
<td>12</td>
</tr>
<tr>
<td>Strongly favor</td>
<td>32</td>
<td>Strongly favor</td>
<td>42</td>
</tr>
<tr>
<td>Somewhat favor</td>
<td>44</td>
<td>Somewhat favor</td>
<td>46</td>
</tr>
<tr>
<td>Somewhat oppose</td>
<td>18</td>
<td>Somewhat oppose</td>
<td>9</td>
</tr>
<tr>
<td>Strongly oppose</td>
<td>6</td>
<td>Strongly oppose</td>
<td>3</td>
</tr>
</tbody>
</table>

Of those who initially opposed nuclear energy, 57% changed to favor.