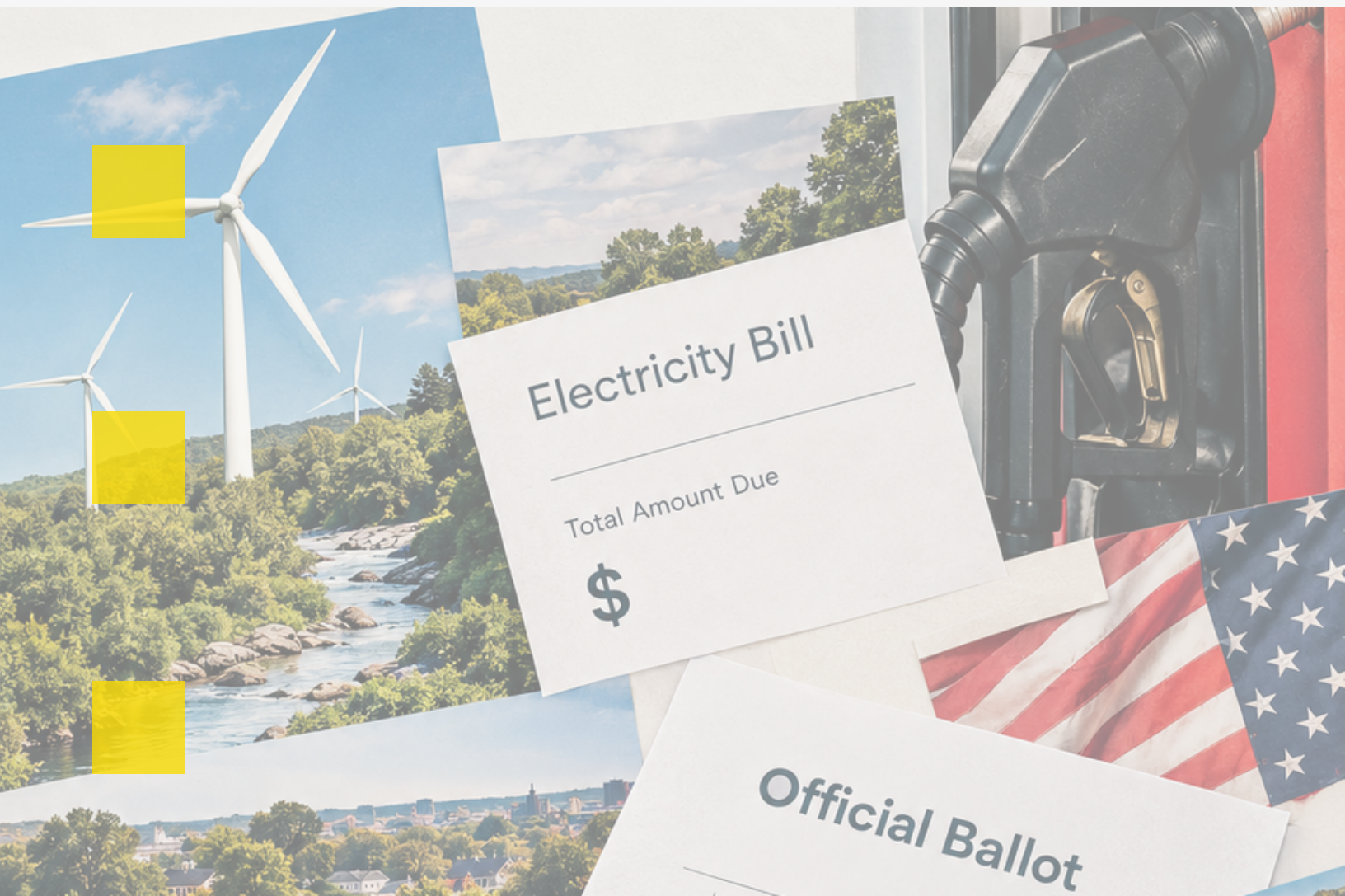




Communicating about Climate and Clean Energy in an Age of Affordability



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Andrea Everett, Embold Research
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Introduction

In 2025, Heatmap commissioned Embold Research to examine a question that has been top of mind for many climate and clean energy professionals since the 2024 election: how to effectively connect with voters on climate action and clean energy in today's political environment. This environment is considerably more hostile than it was just a few years ago. While voter concern about the warming planet is broad, it is also shallow, and it now competes for Americans' attention with acute anxiety about the cost of living and the price of energy. The Trump Administration attacks renewable energy at every opportunity. Many of the elected officials who once saw climate as a winning issue (or at least not a losing one) have grown quiet, wary of appearing out of touch. At the same time that clean energy technologies have become cheaper than ever – and in many cases, cheaper than fossil fuels – the central challenge of the climate movement and the energy transition is good old-fashioned politics. How to talk about climate and clean energy in terms that hold up in the face of rising electricity bills? And how to motivate voters who are on the side of clean energy, but who feel they can't make a difference?

To explore these questions, Heatmap collaborated with Embold Research on a three-phase public opinion research program pairing quantitative and qualitative components, which we conducted between late 2025 and mid-2026. Each phase of research built on the previous one, starting with a large national survey to uncover the core values, priorities, and beliefs of three broad segments of the electorate with different views of climate change. We called these groups Skeptics, Persuadables, and Persuaded. This survey was followed, first, by in-depth interviews with voters from each segment, and then a second national survey that tested insights from the interviews on a larger scale.

Phase 1, a nationwide survey of 3,210 registered voters, was fielded from November 18 to December 3, 2025. Its central purpose was twofold: to sort voters into politically relevant segments based on how they perceive climate change, and to identify the values each group holds most dear, the issues they care about, and the specific hopes and concerns they bring to energy and climate policy. The segmentation of voters into Skeptics, Persuadables, and Persuaded reflected a simplified version of the segmentation approach used by the Yale Program on Climate Change Communication in its "Global Warming's Six Americas"

framework.¹ Broadly, Persuadeds are voters who not only believe climate change is happening, but who also see it as an urgent threat that public policy should actively address. Skeptics may question whether climate change is happening at all, and do not believe it is caused by human activity. They don't worry about its impacts, or view it as an issue in need of solutions. Finally, Persuadables fall in the broad middle between these views. They may or may not believe climate change is caused primarily by human activity. They tend to believe it will cause harm in the future, but they don't view the issue with urgency.

Phase 2 of the research moved from this broad look at the electorate to in-depth conversations with individual voters. Between February 13 and March 9, 2026, we conducted 15 interviews with participants from the three segments. These interviews provided more detail about why voters believe what they do, the climate and energy-focused messages that appeal to them, and the perceived expense of clean energy technologies, among other topics. They also identified several key themes that shaped the final phase of research.

Phase 3 returned to the full electorate to test the insights from the interviews with a robust national sample. From June 22 to 29, 2026, we surveyed 2,161 registered voters, applying the same segmentation used in Phase 1. This survey concentrated on several of the interviews' most notable themes. The first section looked at how voters view utility-scale solar, wind, and storage through the prism of consumer clean energy technologies, such as rooftop solar and home battery systems. A second section addressed themes of action, barriers to action, and trust. And third, we tested how Skeptics, Persuadables, and Persuadeds respond to candidate messages written specifically for them, and built from the language and priorities the prior research phases revealed matter most to each segment.

Phase 1: One electorate, three value profiles

The Phase 1 survey revealed dozens of ways, both large and small, that Skeptics, Persuadables, and Persuadeds differ. Before highlighting these, it is worth pointing to a few areas of common ground. First among these is the importance of pocketbook issues. Across every segment, “the economy and jobs” as well as “inflation and the cost of goods and services” were among voters’ most important issues, with at least 9 in 10 overall citing these as very or extremely important. In the climate and energy space, one of the few areas of agreement concerned the appeal of different outcomes from efforts to address climate

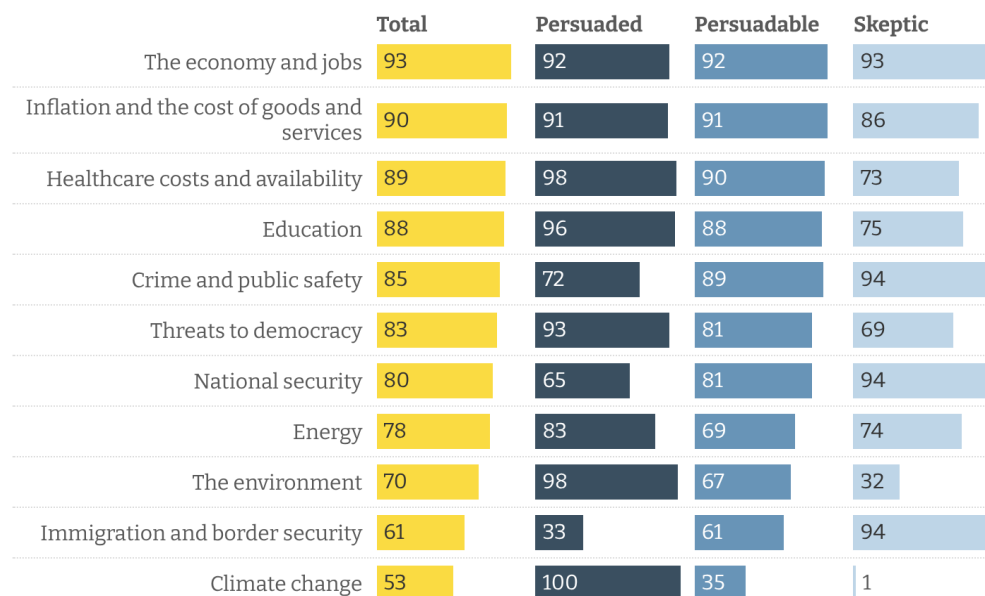
¹ The Yale Program on Climate Change Communication’s “[Global Warming’s Six Americas](#)” framework segments Americans into six audiences using four questions: 1) “How important is the issue of global warming to you personally?”, 2) “How worried are you about global warming?”, 3) “How much do you think global warming will harm you personally?”, and 4) “How much do you think global warming will harm future generations of people?” The Heatmap / Embold Research surveys replaced the term ‘global warming’ with ‘climate change’ but otherwise used these same four questions for segmentation. For analysis we consolidated Yale’s six audiences into three segments better suited to the scope of this project. Climate Skeptics combine Yale’s Doubtful and Dismissive groups; climate Persuadeds correspond to Alarmed; and climate Persuadables bring together the Concerned, Cautious, and Disengaged.

change. When asked how much each of eight potential outcomes, if they happened, would benefit these voters and their communities, “lowering energy costs over time” was among the top impacts for every segment. Remaining areas of agreement center on the few potential openings to reach Skeptics that are also meaningful for the other segments, though not necessarily their top concerns. For instance, “making America more energy independent” was the only potential outcome of focused climate action that majorities across all segments see as a major benefit. Likewise, large majorities of each segment (from 74% to 86%) are at least somewhat concerned about the reliability of the U.S. electrical grid.

The issue rankings also highlight a theme that appeared through all phases of the research. Overall, voters placed climate change last of the eleven issues tested, with 53% rating it very or extremely important while “the environment” ranked well above it at 70%. This difference is driven entirely by Persuadables and Skeptics, who both rate the environment far more important than climate change, even as both are universally important to Persuadeds. That the same voters respond so differently to two closely related words is a pattern the later interviews would take up directly.

EMBOLD research

How important is each of the following issues to you personally?



Bars show total Extremely + Very important.

Elsewhere, the three segments separate along lines that go well beyond their views on climate, and that reflect what each group prizes and fears. Persuadeds mainly identify as Democrats (82% in the Phase 1 sample, 72% in Phase 3). Kindness is their top personal value, while “Leaving a better world for future generations” and “Protecting the environment” are among their leading community values. Overwhelmingly, Persuadeds believe that climate change is caused by human activity (91%), and are correspondingly optimistic that humans

can take action to meaningfully address it. Significantly, they believe almost universally that government policy (97%), changes by American businesses (96%), and new technology (95%) can each make a significant difference, but are notably less likely to say the same about “actions by individuals like you” (70%). Nearly 7 in 10 (69%) view efforts to address climate change as mostly an opportunity for America. Persuadeds are not exempt from cost pressures, either. In fact, they are the most worried about the cost of energy today (69% very or extremely worried, versus about half of Persuadables and Skeptics), though they are inclined to see clean energy as the cure for high bills rather than the cause. Clearly, this group does not need to be convinced to support climate action or clean energy. The gap, for them, and the core communications challenge, is in motivating them to take action in line with their values.

EMBOLD research

Below is a list of values that many people say are important in their communities and for the country. Please choose the top 3 or 4 that are most important to you.

	Total	Persuaded	Persuadable	Skeptic
Freedom	63	44	67	84
Safety and security	55	41	63	61
Leaving a better world for future generations	49	66	48	27
Equal opportunity	43	67	41	11
Fairness	34	45	36	18
Protecting the environment	31	59	18	5
Limited government	31	7	30	70
Patriotism	27	5	25	59
Neighborliness	19	20	23	17
Connection to land / conservation	17	24	14	13

Climate Skeptics identify overwhelmingly as Republicans (89% in Phase 1, 85% in Phase 3). If there is a single organizing principle that distinguishes this group, it is freedom and self-determination. When asked how they prefer to address major challenges facing the country, they were far more likely than the other segments to choose “letting the free market solve problems without government interference” (34%). Their core community values are freedom (84%) and limited government (70%). Although family is their top personal value, only about 1 in 4 (27%) chose “Leaving a better world for future generations” as a core community value. Skeptics are unconcerned about climate change, and only 4% believe it is mostly caused by human activities. They are also dubious about the impact of efforts to address it, with 6 in 10 (59%) indicating that these efforts are “mostly a threat to America.” Still, these voters are not indifferent to energy. Three in four (74%) rate it as very or extremely important, and the potential impact of climate action Skeptics value most is

“Making America more energy independent” (60% view this as a major benefit). This makes sense given that no issue is important to a larger share of Skeptics than national security (94%). All in all, Phase 1 suggested that Skeptics are unlikely to be moved by appeals to future generations, the environment, or public health. What will move them, if anything does, is reliable and independent energy, a level playing field for businesses to compete in the free market, and the freedom to make their own choices.

Persuadables are of central interest to this research program, and they are much more politically mixed than the other segments (50% Republicans, 35% Democrats, and 14% Independents in the Phase 1 sample, nearly identical in Phase 3). Their top personal value is family and their top community value is freedom, followed by safety and security. Nearly half also selected “Leaving a better world for future generations.” Slightly fewer than half (44%) believe climate change is caused primarily by human activities. The lever they are most optimistic about to make progress on climate change is new technology and innovation, with 81% believing this can make at least a fair amount of difference. Much more than Skeptics, Persuadables view various prospective impacts of climate action as beneficial for themselves and their communities. More than half see major benefits in lowering energy costs over time (63%), making America more energy independent (61%), improving public health (59%), reducing air pollution (56%), and more affordable home insurance (52%). Yet their top concern about efforts to address climate change – that it will increase energy costs – highlights the core challenge of convincing this group. More than half (52%) are very or extremely concerned about energy costs. And barely a quarter (26%) believe efforts to address climate change are mostly an opportunity for American growth, jobs, and innovation. So while most Persuadables recognize concrete benefits in climate action and clean energy, they weigh those against real cost concerns that often hold them back. Yet there are also a variety of openings to reach them, from Skeptics’ emphasis on freedom and energy independence to health, pollution, and protecting future generations.

EMBOLD research

Below is a list of things some people think will happen as a result of efforts to address climate change. If it happened, how much would each of the following benefit you and your community?

	Total	Persuaded	Persuadable	Skeptic
Lowering energy costs over time	66	81	63	44
Making America more energy independent	65	69	61	60
Improving public health	62	88	59	27
Reducing air pollution	60	89	56	18
More affordable home insurance	56	71	52	36
Developing new American technology	54	69	49	37
Creating new jobs in clean energy	53	81	47	16
Fewer or less severe extreme weather events	49	80	43	10

Bars show percent that selected 'Major benefit.'

Phase 2: Different segments, shared obstacles

Phase 1 pointed to the openings most likely to reach each segment and to the pitfalls that risk getting in the way. In Phase 2, we designed the interviews to explore these issues in greater detail and in voters' own words. Some questions and messages were common across multiple segments, such as those probing voters' reactions to crisis-focused language about climate change. Others were unique. With Skeptics, we highlighted freedom, choice, reliability, energy independence, and a level playing field for business, avoiding direct discussion of climate change. With Persuadables, we explored health, protecting the future, energy costs, the promise of new technologies, and the relationship between climate change and the environment. The emphasis shifted with Persuadeds, and focused largely on identifying catalysts and barriers to individual behaviors promoting clean energy and climate action. The messages tested in each interview were built from these profiles.

The interviews did two things at once. They confirmed that the three segments have genuinely different communication needs, and they also revealed how much those needs nonetheless overlap. Taking the differences first, Skeptics generally responded relatively well to an economic and freedom-based case for clean energy that never mentioned climate. Persuadables asked for hard proof of claims about clean energy affordability, including concrete and local evidence that it works and lowers bills, and they warmed to clean energy presented as an opportunity rather than a sacrifice. Persuadeds, already convinced, evinced a need for direction instead, a specific and achievable set of things they could do. Messaging built for any one of these audiences could easily fall flat with another, or even push it away.

Still, the overlap mattered just as much, with several patterns that held across all or nearly all of the 15 conversations. One such pattern was that the language of crisis and catastrophe fell flat everywhere, though for different reasons in each segment. While Skeptics dismissed such descriptions as manipulation, Persuadables experienced them as exaggeration that clashed with the gradual changes they observe in their own lives. Even Persuadeds, who consider climate change an urgent threat, described apocalyptic framing as more numbing than motivating, presumably the opposite of the intended effect. Whatever their point of view, the interview participants responded to plain talk about progress on clean energy better than to warnings about a warming planet.

Another shared pattern was the depth of institutional and corporate distrust, and it colored everything else. Across every segment, participants had more faith in their own experience, their neighbors, and the numbers on their utility bills than in advocacy groups, elected officials, or the companies that sell them power. Many volunteered, without prompting, that the energy system is arranged to serve corporations and the powerful rather than ordinary families. Still, the impact of this suspicion differed by segment. Among Persuadeds it presented as futility, a sense that their individual choices are too small to

matter against forces that large. For Persuadables and Skeptics, in contrast, it registered as distrust of the politicians and organizations most associated with clean energy, and disbelief that these entities would ever allow cost savings from cheaper energy sources to be passed down to consumers. Either way, the implication was the same: that institutional messengers had lost the benefit of the doubt, and what voters trusted instead was mostly what they could see for themselves.

Our most significant discovery, and the one that most directly shaped Phase 3, was a perception gap most pronounced among Skeptics and Persuadables. These voters do not see solar and wind as affordable, because the clean energy they are most familiar with is a rooftop solar system or an electric vehicle. When a claim that is true at utility scale, that solar and wind are now among the least expensive sources of new power, collides with the experience of getting a \$50,000 solar installation quote, the personal experience weighs heavily. That same sticker shock then attaches to large solar and wind farms, which many assume must also be costly. Still, despite its expensive reputation, rooftop solar was the most familiar and best-liked clean energy technology in every segment. Even Skeptics favor it, because it facilitates greater personal control over their energy use, more independence from distrusted utilities, and lower monthly bills. In contrast, wind met resistance almost everywhere, and battery storage was mostly unfamiliar. Solar, especially on one's own roof, was nearly synonymous with clean energy in many participants' minds.

One more instinct came up repeatedly, especially among Skeptics and Persuadables. When asked explicitly about "climate," many participants answered by talking about the environment, referring to topics such as clean air and clean water, conservation, wildlife, and keeping their surroundings free of pollution and waste. For these voters the word climate mostly meant weather, and held a clear partisan charge. In contrast, the environment connected to values they already held and were glad to claim. This gave a human explanation for one of Phase 1's starker results, that these same voters rated the environment far above climate change in importance. The lesson was not that the climate frame should be discarded, but that except for those who already view climate change as an urgent problem to solve, an environmental frame travels considerably further.

These insights informed the design of Phase 3 in several ways. Because the divide between consumer and utility-scale clean energy proved so central, we designed the Phase 3 survey to compare directly how voters regard the technologies they might buy for their own homes against those built to supply the grid, and to establish what they believe about the affordability of each. Because distrust was so central to what we heard from voters, we added a set of questions on the clean energy actions voters do and do not take, the reasons they hold back, and whom they trust on energy issues. And because each segment appeared reachable through a different combination of appeals, yet all three kept returning to cost, we wrote three candidate messages, one for each segment based on the language and priorities revealed through the interviews, and put all three to the full electorate.

Phase 3: Appealing, but not believed

The Phase 3 sample comprised 42% Persuadeds, 31% Persuadables, and 22% Skeptics (plus 6% who could not be categorized).² Much of what it measured echoed, across the full electorate and with sharper precision, what the earlier phases had found. Perhaps the clearest case is the gap between “the environment” and “climate change,” first noted in Phase 1 and later fleshed out in the interviews. This distinction reappeared in June essentially unchanged. Among Persuadables, 32% rated climate change very or extremely important, while twice as many, 65%, said the same of the environment. Among Skeptics nearly a third (32%) rated the environment as a very or extremely important issue, versus just 1% for climate change.³ The consistency of this framing distinction across all three phases marks it as one of the more durable findings in the research, and among the most useful, since word choice is one of the easiest levers a communicator can pull.

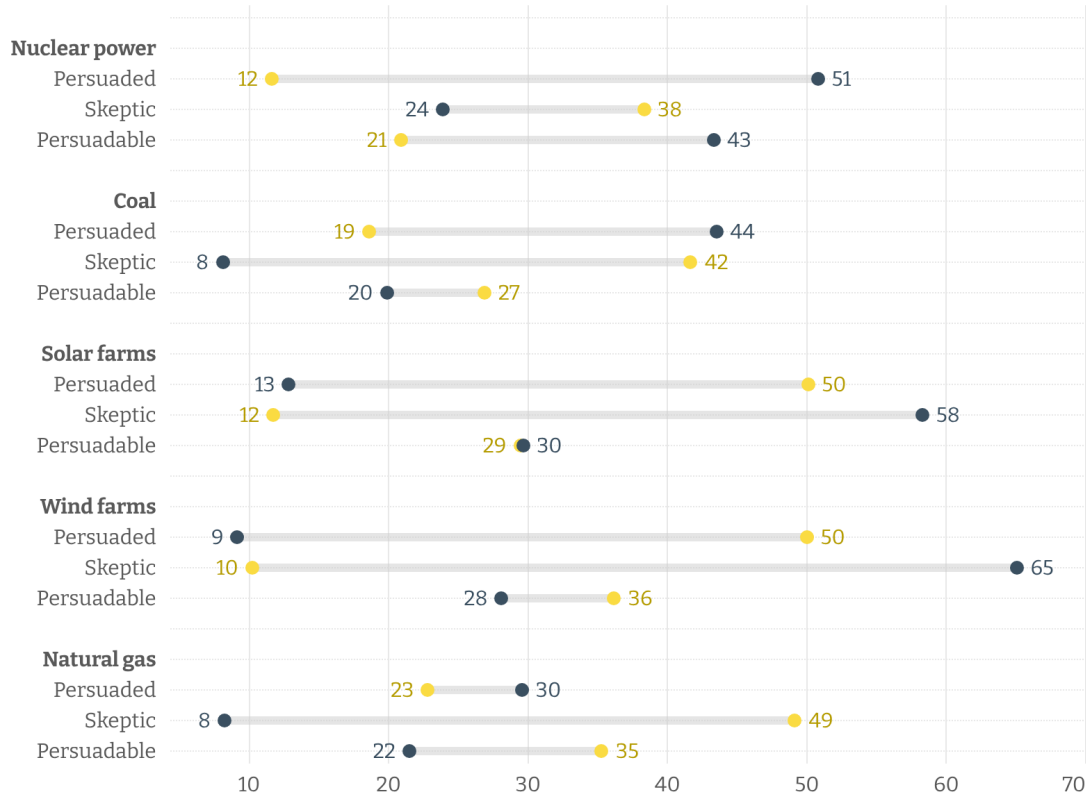
Voters’ perceptions of the high cost of both consumer clean energy technologies and utility-scale ones also persisted here. While the consumer technologies voters spoke favorably of in the interviews are indeed broadly popular – rooftop solar drew 64% favorability and home battery storage 57% – affordability is a different matter. Voters are just as likely to believe their household cannot afford these technologies as to believe they can, with majorities of Skeptics (54-55%) believing they are unaffordable. What’s more, fully 3 in 4 Skeptics and a strong plurality of Persuadables (48%) believe these technologies do not save enough money over time to make them worth a high up-front cost. In contrast, nearly 2 in 3 Persuadeds believe they save enough money over time to be worth the investment. Utility-scale versions of these technologies fared moderately worse than consumer versions, with solar farms at 58% favorability and grid-scale battery storage at 45%. Here, majorities of all voters and even larger majorities of both Skeptics and Persuadables are doubtful about the affordability equation. Overall, 55% believe solar and wind are only cost-competitive because of subsidies, and 57% say advocates exaggerate how cheap these energy sources have become. Most telling of all, beliefs about the costs of utility-scale energy sources closely track climate attitudes. Persuadeds tend to name solar and wind as the least expensive sources while Skeptics name them as the most expensive. What the interviews suggested about a handful of voters, the survey confirms across the electorate: outside of those who see climate change as an urgent problem, the affordability case for clean energy lacks credibility.

² In order to be assigned a segment, respondents had to complete all four segmentation questions. Those who did not were uncategorized.

³ The 1% of Skeptics who rated climate change as very or extremely important reflects the segmentation criteria, since this was one of the four questions used to distinguish between voters’ climate-related attitudes and beliefs and identify them as Skeptic, Persuadable, or Persuaded.

Now thinking about generating electricity at large scale, which TWO of the following sources do you think are the MOST / LEAST expensive to produce electricity from?

● Least expensive ● Most expensive



Note: For legibility, geothermal and hydroelectric power are excluded here, as differences by segment are small for those sources.

The survey also investigated the prevalence of different types of action individuals may take in support of clean energy, as well as the barriers to these. More than half of voters (55%) reported taking at least one action in the past year. The most common was talking with friends or family (31%), followed by voting for a political candidate at least in part due to their support for clean energy. The barriers to doing more were split by segment just as the interviews predicted. For Persuadeds, the top barriers point to a sense of futility (“The political environment makes change feel impossible”; “Individual actions don’t matter much”). In contrast, both Persuadables and Skeptics overwhelmingly pointed to a lack of trust in the politicians and advocacy groups associated with the issue, followed by the pull of other priorities. The scope of the trust challenge with these segments also stood out when we asked who voters trust to act in the interest of regular people for information and decisions about energy. While 6 in 10 Persuadables trust independent scientists and researchers at least a fair amount, majorities are skeptical of renewable energy companies, elected officials, all levels of government, utilities, and oil and gas companies. The large

majority of Skeptics are dubious about all these entities, ranging from 66% for independent scientists and researchers up to 84% for renewable energy companies.

EMBOLD research

Below are some reasons people give for not doing more to support clean energy. Which of these, if any, apply most to you? Please select up to TWO.

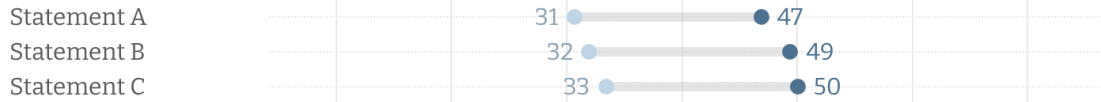
	Total	Climate persuaded	Climate skeptic	Climate persuadable
I don't trust the politicians or advocacy groups working on these issues	33	22	52	34
The political environment makes meaningful change feel impossible	24	39	6	18
Other issues matter more to me right now	24	17	31	27
I'm concerned that clean energy policies will lead to higher energy costs	18	12	25	22
Individual actions don't matter much; the change needs to come from big companies and government	18	24	7	19
I'm not sure what actions would actually make a difference	16	18	10	17
I don't agree with the goal of promoting more clean or renewable energy	7	3	16	5
None of these apply to me	16	19	12	16

Of all the components of the survey, the message testing delivered perhaps the clearest lessons. One pattern evident across all three messages and every segment was that the messages proved easier to like than to believe. For each one, about half of voters found it appealing, but only about a third found it believable. That gap was actually widest among Persuadeds, even though they found all three messages both more appealing *and* more believable than the other segments did. Still, when asked to choose a single most preferred message, Skeptics disproportionately chose the one crafted for them and highlighted its themes of energy independence and personal freedom as key reasons. Likewise, Persuadables most often chose the message designed for them, which presented clean energy as an opportunity rather than a sacrifice and highlighted benefits in terms of affordability and a cleaner, healthier environment. Persuadeds also chose this message most often, but by a smaller margin.

Below are three statements a candidate for office might make about energy. For each one, please tell us how appealing you find it, and how believable you find it.

● Believable ● Appealing

All respondents



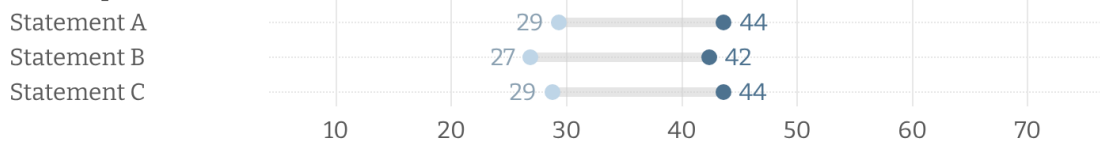
Climate persuaded



Climate skeptics



Climate persuadable



Percentages shown are total 'Extremely' + 'Very' appealing/believable

The most striking finding, though, came from respondents' answers when they were asked what they found most appealing in the message they preferred. Regardless of which message they selected, voters kept returning to the same thing: lower electricity bills. It was by far the top draw in both the message designed for Persuadables, where "lower bills for every household" drew 44%, and in the message designed for Persuadeds, where "putting family bills ahead of utility profits" drew 51%. It was also among the leading draws in the message tailored to Skeptics, where "requiring utilities to pass lower energy costs on to your electricity bill" drew 34%, just behind that message's themes of energy independence and personal freedom. The key conclusion here is straightforward: while voters responded to the tailored appeals in the expected directions, the common denominator for nearly everyone is the pocketbook.

Conclusion

Taken together, the three phases of this research program point in a single direction. For climate and clean energy communicators, the electorate is best understood as three distinct audiences, each needing a different job done. Persuadeds already believe in the

urgency of climate action and clean energy. What they lack is the conviction that their own actions matter, so the core tasks are to give them concrete, achievable things to do and to help them see that their efforts matter. Persuadables are open but unconvinced, and on the central issue of clean energy affordability they demand proof they can see close to home, rather than broad statistics or slogans. Skeptics, meanwhile, may be reachable through appeals to their values of personal freedom and energy independence, supplemented by evidence on cost and reliability, but with so few trusted messengers to make the case, clean energy remains a tough sell.

Beneath these differences runs a dominant shared concern, the one the message testing highlighted most sharply: the electricity bill. For most voters, whatever their view of climate change, the most appealing arguments are the ones about cost, and any case that cannot connect clean energy to household savings begins at a disadvantage. The difficulty is that the affordability argument advocates find most persuasive, that solar and wind are now the cheapest power available, often falls flat with voters whose primary exposure to clean energy is expensive consumer technologies and who distrust institutional messengers. Closing this perception gap is the key challenge of the affordability era in climate politics, and nothing in the survey suggests it will be accomplished by asserting the numbers more forcefully. What the data do support is narrower: when it is relevant, talking about “the environment” rather than “climate,” a word that tends to shut the conversation down with everyone but the already-convinced; and meeting voters on the terms they keep returning to, the cost of power in their own homes.

APPENDIX: FULL TEXT OF CANDIDATE MESSAGES

Statement A: crafted for Skeptics	“The sun and wind are American resources — and for the first time in history, the technology to capture them costs less than the alternatives. Solar costs have fallen more than 90 percent in twenty years. That means cleaner, cheaper electricity built right here with American workers, on American land — power that no foreign country can cut off or hold over our heads. My agenda is straightforward: require utilities to pass those falling costs on to your electricity bill, invest in American manufacturing of solar panels and batteries, and protect every homeowner's right to power their own home. This is energy independence built on American innovation and American labor. This is what winning looks like.”
Statement B: crafted for Persuadables	“The energy that powers our homes also shapes the air our children breathe and the environment we leave behind. And here's the thing — we've reached a point where clean energy isn't a sacrifice. Solar costs have dropped more than 90 percent. Community solar programs let renters and homeowners participate without a big upfront cost. Batteries are making clean energy more reliable every year. My plan is to expand access so that every household — not just wealthy ones — can benefit from lower electricity bills and cleaner air: local solar projects that feed power back into our communities, financing options that remove the upfront barrier, and a grid built for the next fifty years, not the last fifty. We can have a healthier environment, energy we control, and more money in our pockets. That's the transition I want to lead.”
Statement C: crafted for Persuaded	“Here is what we know: solar and wind are now the cheapest sources of new electricity in America, and clean energy has been one of the fastest-growing parts of our economy for years. American workers are building this future right now — on rooftops, in factories, and across rural communities. The question is not whether clean energy works. It does. The question is whether we match the scale of the opportunity. In the next ten years, we can modernize our grid, lower electricity costs for working families, create millions of good jobs, and lead the world in the industries that will define this century. That requires a national clean energy standard, investment in grid infrastructure, and policies that put family electricity bills ahead of utility profits. I am ready to fight for all of it — and I need people who will demand it.”