Zion Travelers Cemetery Reserve, LA

Perspectives from Environmental Justice Communities:

A National Survey

- Environmental & Health impacts: Awareness, Perceptions, & Concerns
- Clean Energy: Economic Opportunity, Awareness, & Perceptions
- Civic Engagement, Trust, & Access to Information
- Accessibility Barriers

A Joint Report by BW Research Partnership and the Climate Equity Initiative, Sponsored by Clean Air Task Force

July 2023

[bw] RESEARCH PARTNERSHIP

CA TF CLEAN AIR TASK FORCE

CLIMATE EQUITY INITIATIVE

About

The Climate Equity Initiative

Clean Air Task Force (CATF) launched the *Climate Equity Initiative* in May 2021 to conduct research and analysis and work with environmental justice leaders and advocates, and community residents to:

- Identify barriers, challenges, and potential opportunities in environmental justice communities;
- Advocate changes and adoption of solutions to systemic barriers and challenges that create and perpetuate environmental injustice, particularly in the context of environmental and climate policies and practices; and
- Ensure that CATF has a better understanding of the needs and concerns of environmental justice communities, and, with their input, develop tools and initiatives to help ensure they have a powerful voice at the table in the transition to a clean energy future.

Too often, proposed climate solutions are developed outside impacted communities and fail to respect the core needs of their residents. As a result, policies, programs, and community engagement initiatives can lack critical success elements, resulting in failed climate-beneficial projects, or perpetuating injustice and inequality. CATF rejects the notion that such failures are inevitable. CATF recognizes that responses to environmental degradation and climate change must consciously employ strategies that to the maximum possible extent not only benefit climate but promote environmental justice and community economic development.

Clean Air Task Force

CATF is a global clean air and climate nonprofit organization working to safeguard against the worst impacts of climate change by catalyzing the rapid development and deployment of low-carbon energy and other climate protecting technologies. When CATF was launched in 1996, our strategy was very focused: change federal policy so that older coal plants would need to meet the same emission rates — and bear the same costs — as new plants. That deeper, broader strategy, which remains our guiding star today, has five key goals:

- **Enact emission limits on power plants**, whether fired by natural gas or coal.
- Press for incentives for **commercial deployment of technologies that can eliminate carbon emissions** from the energy sector, including carbon capture and storage (where fossil fuels will remain a part of the global economy for some time), advanced nuclear energy, and next-generation renewable energy.
- **Attack greenhouse gas and climate-damaging emissions** such as methane leaks from oil and gas production and black carbon emissions from diesel vehicles, marine shipping, and biomass burning.
- **Ensure bioenergy use is at least carbon neutral** and, where possible, carbon negative.
- **Reduce health-impacting pollution by strengthening air quality and emissions standards and enforcement** for power plants, oil and gas production, gasoline and diesel vehicles, and other sources.

BW Research Partnership

BW Research Partnership (BW Research) is a leader in economic and workforce applied research with nationally recognized expertise in surveys, economic modeling and forecasting, and gap analyses. Given BW Research's expertise in workforce, diversity, equity, and environmental justice, CATF's *Climate Equity Initiative* has partnered with BW Research to engage and collaborate with environmental justice communities. BW Research has designed and conducted more than 500 studies for public, private, and not-for-profit organizations globally that have directly impacted federal, state, and local initiatives. In addition to the survey and data collection for the annual *U.S. Energy and Employment Reports* (2016-2022), recent reports include:

- Opportunities to Diversify the U.S. Renewable Energy Manufacturing Supply Chain, produced in collaboration with the American Council on Renewable Energy, December 2022.
- Diversity in the U.S. Energy Workforce: Data Findings to Inform State Energy, Climate, and Workforce Development Policies and Programs, prepared for the National Association of State Energy Officials by BW Research Partnership, April 2021.
- Wages, Benefits, and Change: A Supplemental Report to the Annual U.S. Energy and Employment Report, produced by the Energy Futures Initiative and the National Association of State Energy Officials, 2021.
- Just Transitions Working Group: 2021 Jobs Study, produced as part of the New York State Climate Action Council, December 2021.

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Covant Essex Waste-to-Energy Incinerator, Ironbound Community, Newark, NJ

SECTION 1

Introduction

As part of the Climate Equity and Clean Energy Transition Initiative, Clean Air Task Force (CATF) commissioned BW Research Partnership to conduct a national survey of residents of environmental justice communities, based on self-declared race, ethnicity, and income. We used these socioeconomic indicators to select environmental justice communities because research has shown a strong correlation among race and ethnicity, household income, and Environmental Justice. For the purposes of this report, "environmental justice communities" refers to populations disproportionately impacted by environmental harms due to structural inequities related to their race, income, pollution burdens, and/or additional factors.

The research presented herein is meant to be additive to the existing literature and body of work on environmental justice and climate equity. It is not meant to be a comprehensive or exhaustive look at the intersection between demographics, environmental outcomes, and economic opportunity. This report is an applied research effort, which differs from the academic research space.

The purpose of this national survey and report was to gain greater understanding of community perceptions regarding environmental justice and climate equity issues.

The survey was designed with the following research objectives:

1. Identify community awareness, perceptions, and concerns about environmental and health impacts of pollution and traditional energy infrastructures.
2. Gauge awareness of and interest in clean energy job opportunities, including specific technology awareness and participants' perceptions of industry.
3. Explore the frequency and types of social, community, and civic engagement in communities as well as perceived political influence and trust in local public and private agencies.
4. Identify specific challenges to career advancement or barriers to clean energy job access.
5. Understand energy accessibility.

[1] An Assessment of Environmental Policy in U.S. Climate Alliance States. ClimateXChange. P. 3. September 3, 2021. In addition to the definition, the report further notes that "The exact definition varies by state." https://climate-xchange.org/wp-content/uploads/2018/08/An-Assessment-of-Environmental-Justice-Policy-in-U.S.-Climate-Alliance-States-website.pdf

In total, the research effort resulted in 3,012 survey responses. The distribution of responses by demographic[2] and income group can be seen in Table 1. For more information on the survey methodology and outreach effort, please refer to Appendix A of this report.

The survey included quotas to maintain a representative sample by race and age cohort of the US resident population 18 years of age or older. Survey weights were applied to the final data to ensure that the respondents were representative by race and age and to minimize the impact of non-response bias.[3]

Table 1: Percent of Respondents by Demographic & Income Group[4]

	Percentage of Sector	Total Survey Responses
Female	58.7%	1,721
Male	38.8%	1,221
Gender Non-Binary	1.8%	54
Hispanic or Latino	28.5%	759
Not Hispanic or Latino	71.5%	2,253
Black or African American	15.6%	895
White	73.0%	1,809
Asian	3.4%	146
American Indian or Alaskan Native	9.9%	113
Native Hawaiian or other Pacific Islander	1.3%	34
Other	7.9%	139
The City/Urban Area	40.3%	1,374
A Suburban Area/Outside the City	37.5%	1,068
The Country/Rural Area	22.2%	570
Below $25,000	27.9%	843
$25,000 to $49,999	33.0%	1,017
$50,000 to $74,999	24.2%	772
$75,000 to $99,999	5.3%	132
$100,000 to $150,000	3.8%	100
More than $150,000	3.0%	75

[2] For purposes of the survey, BW Research relied upon the U.S. Census Bureau classifications regarding race. https://www.census.gov/topics/population/race/about.html

[3] For more information on the weights used by race and age, please see Table 3 in the Methodology section.

[4] It should be noted that because the survey results were weighted, the n's reported for each question may not be equivalent to the expected n based on the percentage calculation. The gender question omits the options "Other" and "Prefer not to say", n's may not sum to 3,012. The race question allowed respondents to select multiple races, n's may not sum to 3,012. The income question omits the option "Don't know/ Refused", n's may not sum to 3,012.

Air Products & Chemicals Garyville, LA

SECTION 2

Executive Summary: Key Findings

Environmental & Health Impacts

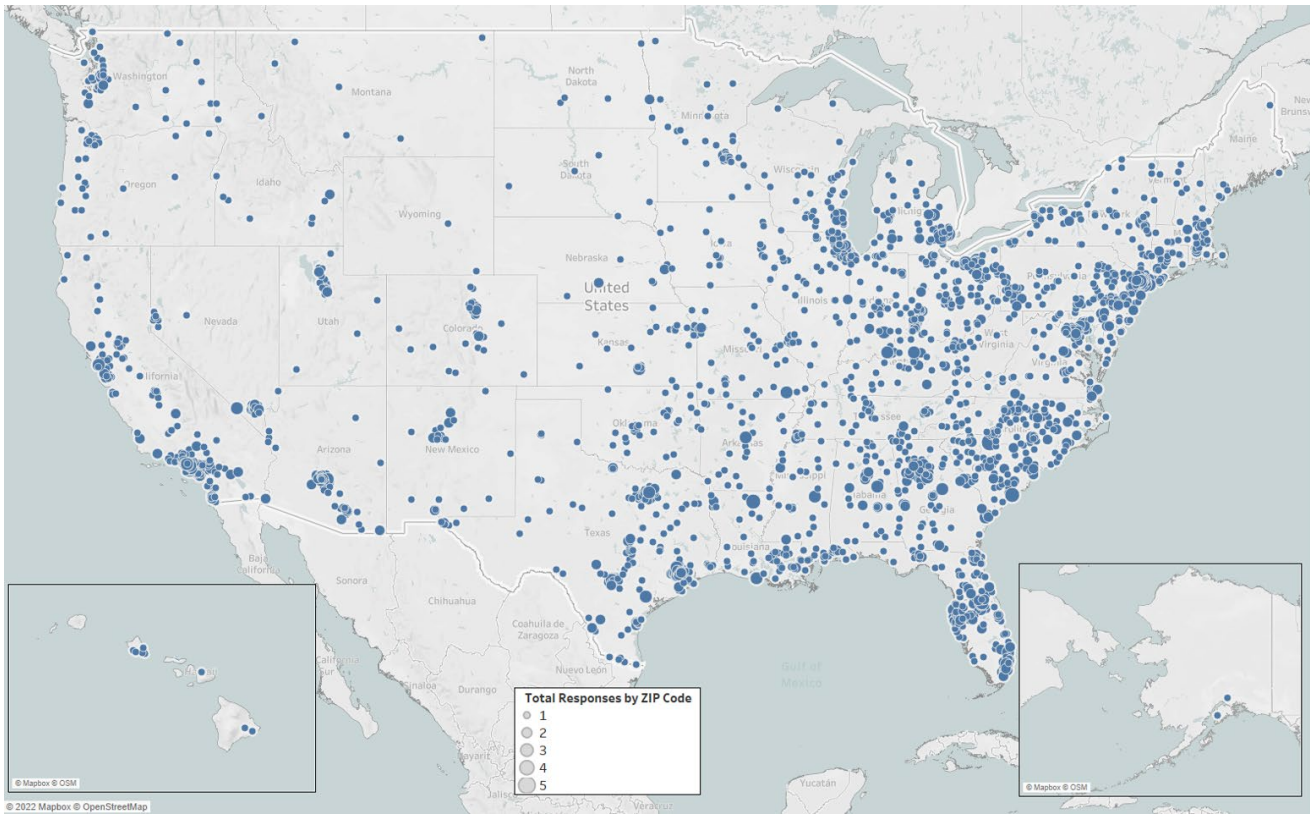
Perceived health impacts from environmental pollution were high among survey respondents. Almost three-quarters of respondents agreed on some level that they are concerned with the health effects of environmental pollution in their communities. More than half noted that environmental pollution is already affecting their health and the health of family members and neighbors. Respondents were most concerned with the health impacts of poor air quality, though health impacts from severe weather events and poor water quality closely follow. The perceived health impacts caused by environmental degradation was most notably higher for the following groups compared to the overall respondent average: Hispanic or Latino and Black or African American.

Survey respondents indicated concern over environmental issues. At least two in five survey participants reported overall concern with environmental issues in their community, particularly regarding issues of waste, water quality, air quality, and climate change. Among respondents who indicated overall concern with environmental issues, 66 to 68 percent indicated concern with specific types of environmental issues — such as air quality, severe weather events, or water quality and access to clean water. Notably, overall concern amongst high-income communities and American Indian, Hispanic or Latino, and Black or African American communities was above the average for all survey respondents.

Opportunity, Awareness, & Perceptions

Survey participants were largely aware of common clean energy technologies, though they were less familiar with newer technologies. About five to seven in ten survey participants reported awareness of solar, wind, electric vehicle, and energy efficiency technologies. Hydropower and energy storage garnered awareness from about 24 to 37 percent of respondents, while one in seven respondents reported awareness of grid modernization technologies, including smart grid or microgrids and advanced nuclear technologies. For the remaining nascent technologies, such as carbon capture and green hydrogen, fewer than 13 percent of survey respondents indicated awareness. Roughly seven percent of participants reported that they were unaware of any of the listed clean energy technologies.

Figure 1: Survey Respondents by Location



Survey respondents felt positively about the clean energy transition, though there was some concern about job losses. Respondents rated the benefits of clean energy technologies highly, including job creation and reduced environmental pollution. About 66 percent of participants agreed that the clean energy industry could be a source of well-paying jobs for their community, that they would approve siting of new clean energy infrastructure in their community, and that energy production from renewable resources would reduce environmental pollution in their community. Four in ten respondents did indicate that they believed a transition towards cleaner sources of energy production would result in job losses in their communities. This concern was more pronounced among Hispanic or Latino communities — about 10 percentage points higher than the average and 13 percentage points higher than non-Hispanic or Latino respondents.

Interest in clean energy careers was slightly higher compared to careers in fossil fuel industries. 66 percent of respondents reported some level of interest in building a career in the renewable energy, energy efficiency, or electric vehicle industries; about 55 percent of respondents also indicated some level of interest in building a career in the fossil fuel industry. Six in ten respondents indicated that they would likely apply to a renewable energy position if they came across a job listing when searching for a new employment opportunity; only four in ten reported they would do so for a job listing in non-renewable industries such as natural gas, coal, nuclear, and oil. White, non-Hispanic or Latino respondents were least likely to indicate that they would apply for a renewable energy job.

Hispanic, White, and Asian respondents were most likely to have actively searched for clean energy employment opportunities. About a quarter of Hispanic or Latino respondents indicated that they have actively searched for work opportunities in the clean energy industry; this was 13 percentage points higher than the average and 19 percentage points higher than non-Hispanic or Latino respondents. Asian and White respondents were most likely to actively search for clean

energy jobs compared to all other races and the average, as were urban, middle-income residents.

Despite high interest in clean energy careers, there were several barriers to entry. About 63 percent of respondents reported never having considered working in the clean energy industry and about 17 percent reported that they have considered it but have never actively searched for job listings. For about six in ten respondents, the greatest perceived barriers to entry included lack of education and lack of awareness regarding where to search for job listings.

Civic Engagement, Trust, & Information Access

Civic engagement is important, and communities believed they have influence over local policy outcomes. About half of survey respondents agreed that participation and engagement in community issues is important and that their voice can influence local policy outcomes, with Hispanic or Latino, urban, middle-income, and Black or African American communities indicating higher levels of agreement on these sentiments. On the contrary, however, a notable 49 percent of respondents either disagreed or offered no response to either of these statements.[5]

Though a majority expressed interest and confidence, reported civic participation was low, with the Internet being the most common method of engagement. About half of respondents reported that they had never participated in civic engagement activities other than expressing opinions on the Internet. Of the activities tested, expressing opinions on community issues via social media or the Internet topped the list, with about 39 percent of respondents reporting that they do so at least once a week or once to a few times a month. Fewer than 10 percent of respondents regularly raised awareness or money for an issue or campaign, attended local political meetings, or were active members of a local political action group. Across the board, Hispanic or Latino communities were most likely to regularly partake in civic engagement activities.

Local/regional television stations and social media topped the list of resources for receiving news on environmental issues. Just over half of respondents reported that they get their information about local environmental issues through local/regional television stations and just over half reported the same for social media. About a third relied on the local newspaper, and just under a quarter relied on radio.

Scientists, family members or friends, and environmental organizations were the most trusted sources of information. At least six in ten respondents reported some level of trust in these sources of information for community environmental issues. The government, including local politicians, was lowest on the list, garnering at least some level of trust from under 40 percent of respondents.

Accessibility

Though most agreed the cost of electricity is too high, awareness of electricity reduction rebates was low. About three-quarters of respondents agreed that the cost of electricity is too high, but only one in eight indicated awareness of any programs, resources, incentives, or rebates that can help reduce the cost of electricity.

Financial resources, experience, and education were the greatest perceived barriers to career advancement. About six in ten respondents reported that having sufficient financial resources or security to pursue their career goals is an obstacle to finding employment or advancing their career. Additionally, just over half of respondents agreed that acquiring relevant experience or a necessary academic degree or certifications is a barrier to career navigation. Just under half of respondents also noted that lack of access to transportation is an obstacle to career advancement.

[5] This includes “strongly disagree”, “somewhat disagree”, “neither”, and “don’t know or refused”.

San Juan Generating Station, near Waterflow, NM

SECTION 3

Community Survey Results

This section describes the survey results, presenting responses from survey respondents as well as crosstabs by race, ethnicity, income, and area of residence. These crosstabs highlight how sentiments, perceptions, and awareness vary for different communities and demographic groups across the nation and can be found in the green call-out boxes throughout the report.

The Community Survey Results section is divided into the following sub-sections:

1. Environmental & Health Impacts: *Awareness, Perceptions, & Concerns*
2. Clean Energy: *Economic Opportunity, Trust, & Perceptions*
3. Civic Engagement & Access to Information
4. Accessibility Barriers

Environmental & Health Impacts: *Awareness, Perceptions, & Concerns*

About 40 percent of survey respondents — or two in five — indicated general concern about environmental issues in their community (37.7 percent), while the remaining 53.7 percent of respondents reported they are not concerned with environmental issues. The remaining 8.5 percent of respondents did not know or refused to respond to the question regarding concern about environmental issues (Figure 1).

Overall concern with community environmental issues was four to nine percentage points higher among the following groups than the overall average: higher earners, Hispanic or Latino, American Indian, and Black or African American. In contrast, predominantly rural or White respondents were less likely to indicate concern over environmental issues — about three to six percentage points lower than average.

Of the individuals who indicated general concern, the top four environmental issues offered were waste/

Figure 1: Overall Environmental Concern

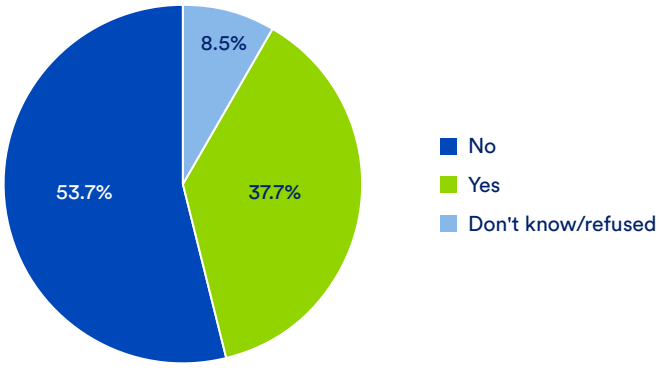
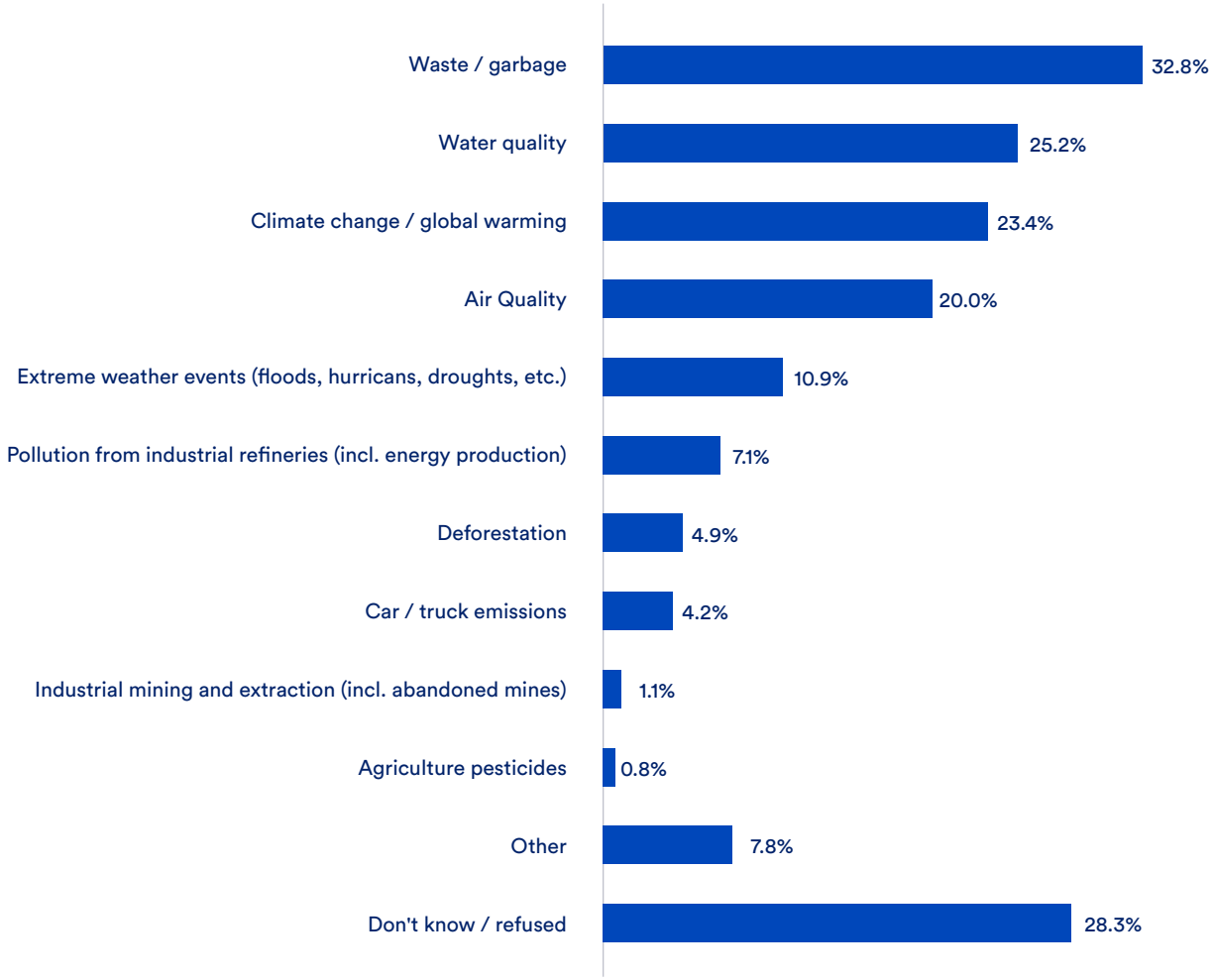


Figure 2: Concern with Specific Environmental Issues (Unaided)[6]



[6] In an unaided question, survey participants are asked to provide a "free response" without a list of options.

garbage (32.8 percent), water quality (25.2 percent), climate change/global warming (23.4 percent), and air quality (20.0 percent). This was an unaided question, meaning respondents were not offered a list of issues, but rather volunteered top-of-mind concerns that the research team coded into conceptually similar categories. Respondents were asked to provide up to two environmental concerns (Figure 2).

When asked in an aided question (i.e., where response options were provided) about three specific environmental issues — air quality, severe weather events, and water quality and access — the overall level of concern rose from the initial 37.7 percent of respondents to roughly 65 percent of all respondents across all three issues. That is, for each of those environmental issues, a majority of respondents indicated they were at least "somewhat concerned" (Figure 3).

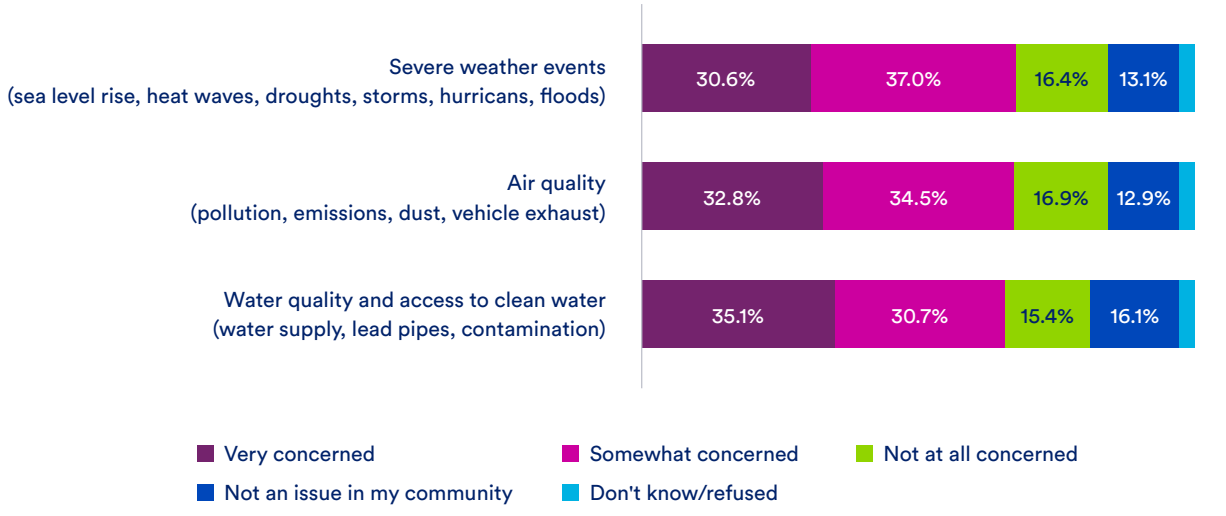
Overall, 67.3 percent of respondents indicated they were either "very" or "somewhat" concerned about air quality, including pollution, emissions, dust, and vehicle exhaust, while 67.6 percent of respondents are similarly concerned about severe weather events, including sea level rise, heat waves, droughts, storms, hurricanes, and floods. For water quality and access to clean water, 65.8 percent of participants indicated concern.

About one in seven respondents reported that these three environmental concerns are not issues in their community, and roughly one in six indicated that they are not concerned with any of these issues.

Compared to the overall average, concern about air quality, severe weather events, and water quality and access was roughly ten to 11 percentage points higher among Hispanic or Latino communities and three to eight percentage points lower for higher-income communities. Native Hawaiian respondents were most concerned regarding water quality and access, with 82 percent indicating overall concern across these issues compared to the 66 percent average.

Concern amongst Black or African American respondents was also two to five percentage points higher than the average, while urban communities were six to 11 percentage points more concerned than rural communities. Concern among White respondents was one to two percentage points below the overall average.

Figure 3: Concern with Specific Environmental Issues (Aided)

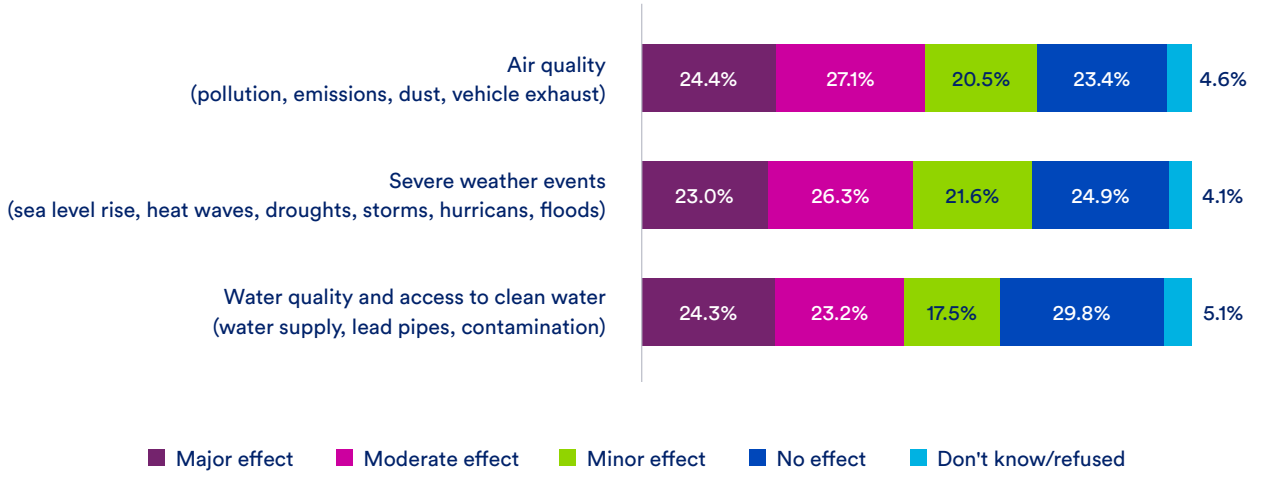


Respondents were then asked to select their perceived level of impact on both their health, safety, and security, and that of someone in their household for the same three environmental issues (air quality, severe weather events, and water quality and access). Roughly half of respondents indicated that at least one of these issues posed either a "major" or "moderate" effect on their community's health, safety, and security (Figure 4).

Poor air quality topped the list, with 72.0 percent noting some effect — either "major", "moderate", or "minor" — followed by severe weather events (70.9 percent), and water quality and access to clean water (65.0 percent).

Health impacts of environmental issues were perceived differently across various demographic subgroups, with Hispanic or Latino and Black or African American communities indicating greater perceived effects compared to the average for all respondents. Hispanic or Latino communities were 16 to 19 percentage points more likely to indicate perceived health impacts compared to non-Hispanic or Latino respondents and 11 to 14 percentage points higher than the average. Black or African American respondents were three to eight percentage points more likely to note perceived health effects compared to the average.

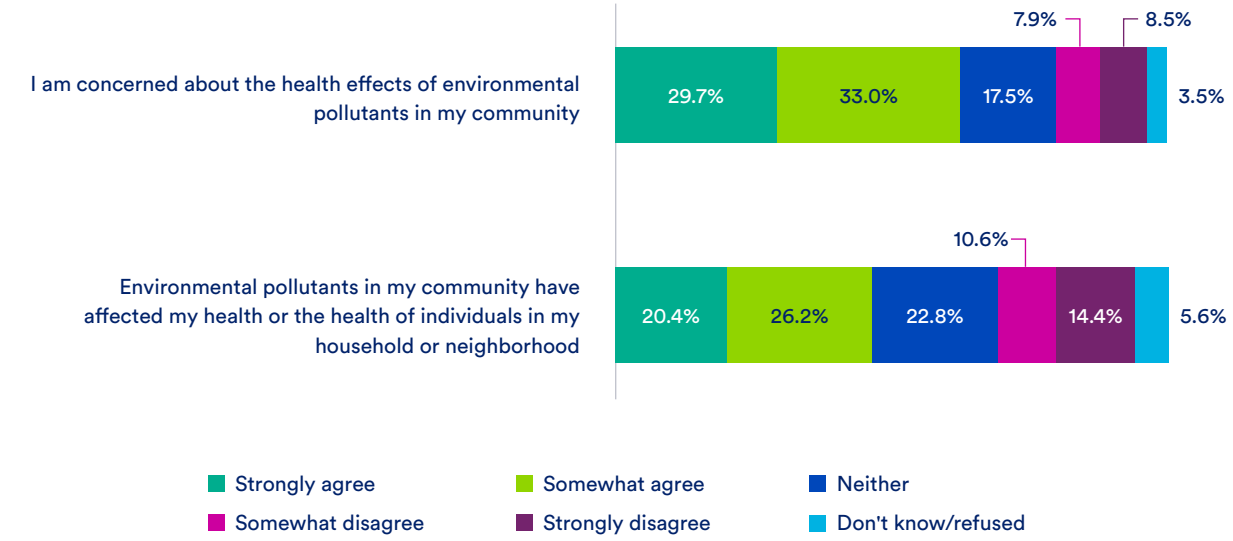
Figure 4: Health Impacts from Environmental Issues



Just over 60 percent of survey respondents "strongly" or "somewhat" agreed that they were concerned about the health effects of environmental pollutants in their community (62.7 percent), while just under half agreed that environmental pollutants have already affected their health or the health of other individuals in their household or neighborhood (46.6 percent) (Figure 5).

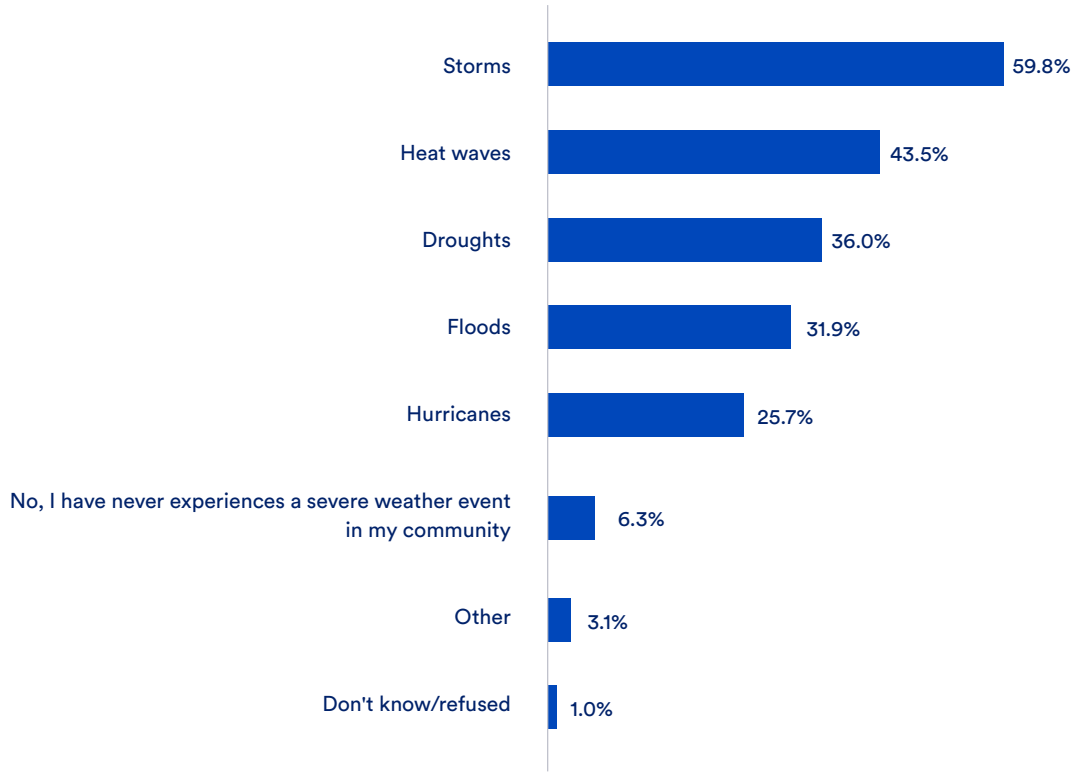
Hispanic or Latino respondents were 15 percentage points more likely than non-Hispanic or Latino respondents to feel concerned about the health effects of environmental pollutants in their community and 17 percentage points more likely to report that these pollutants have already affected the health of themselves or individuals in their community. Urban communities were 10 to 12 percentage points more likely to indicate concern compared to rural communities. Highest earners ($100,000 and over) were five percentage points less likely to indicate concern with environmental pollutants compared to the respondent average and 11 percentage points less likely to indicate that environmental pollutants have already affected health outcomes in their community. Among racial groups, Black or African American and Native Hawaiian respondents were most likely to indicate concern.

Figure 5: Concern with Health Impacts of Environmental Issues



Survey respondents were then provided a list of different weather events and asked to indicate if they had ever experienced any of these severe events. Storms topped the list, with 59.8 percent of participants reporting that they have experienced storms in their community, followed by heat waves (43.5 percent), droughts (36.0 percent), floods (31.9 percent), and hurricanes (25.7 percent). Finally, 6.3 percent of respondents indicated that they have never experienced a severe weather event in their community (Figure 6).

Figure 6: Experience with Severe Weather Events

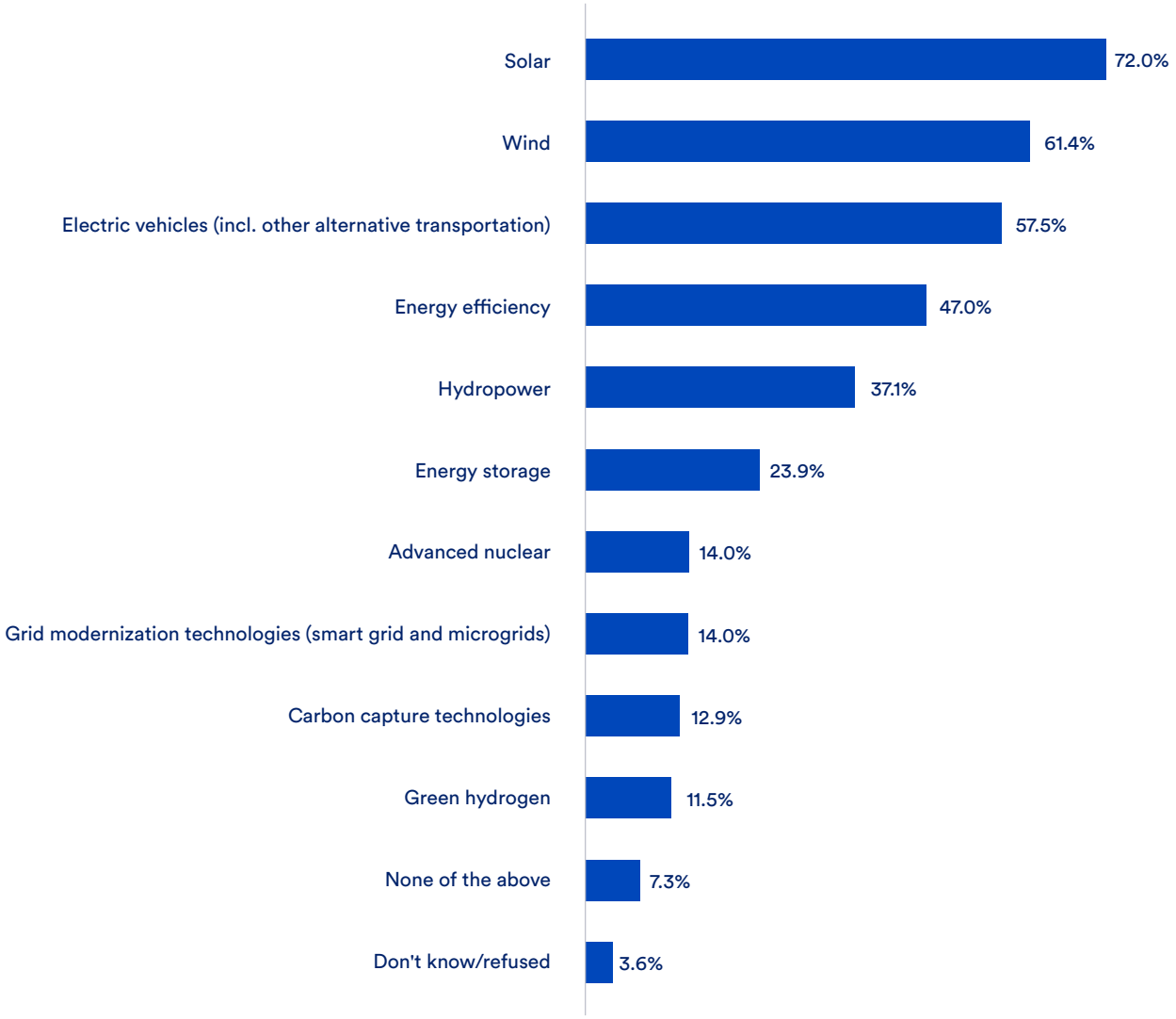


Clean Energy: *Economic Opportunity, Awareness, & Perceptions*

Awareness of various clean energy technologies was high amongst survey respondents, with at least half of respondents indicating awareness of technologies such as solar (72.0 percent), wind (61.4 percent), electric vehicles (57.5 percent), and energy efficiency (47.0 percent).

Just over a third of participants also indicated awareness of hydropower (37.1 percent) and 23.9 percent were aware of energy storage technologies. 14 percent of respondents reported awareness of advanced nuclear technologies and of grid modernization technologies, such as smart grids and microgrids. For the remaining (largely nascent) technologies, 12.9 percent of respondents were aware of carbon capture and 11.5 percent were aware of green hydrogen technologies. Finally, 7 percent reported that they were unaware of any of the listed clean energy technologies (Figure 7).

Figure 7: Clean Energy Technology Awareness



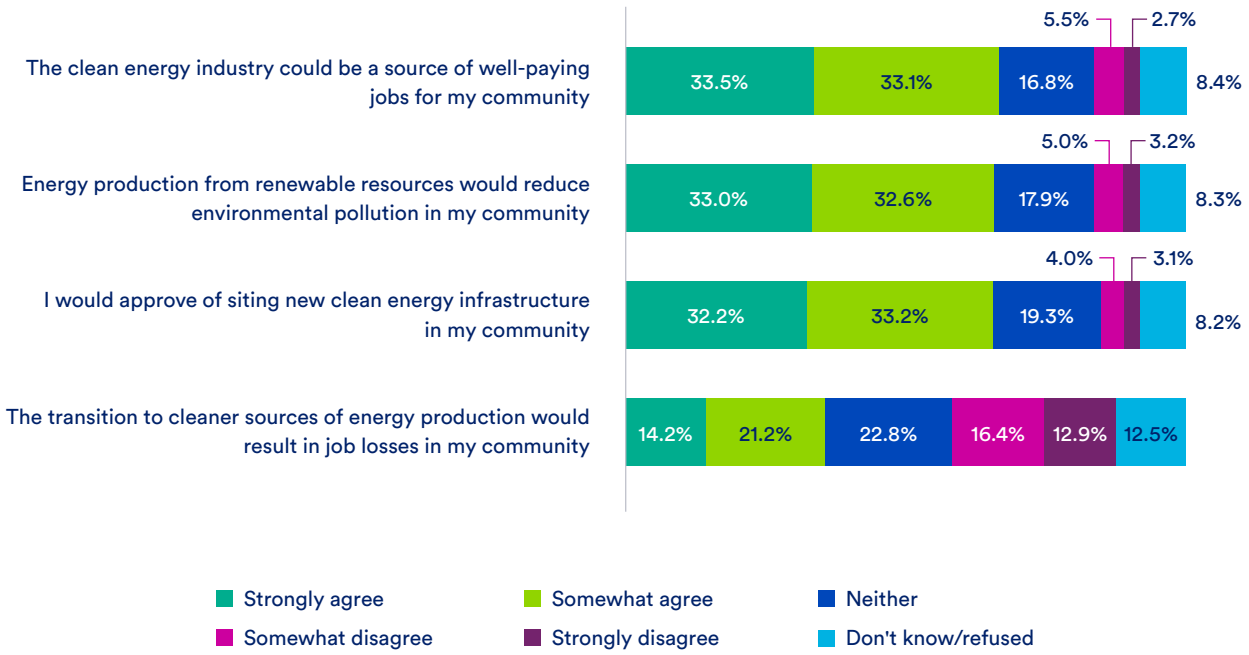
In general, survey respondents felt positively regarding the potential community benefits of clean energy technologies, such as jobs and reduced environmental pollution. Many respondents also indicated that they would approve of siting of clean energy infrastructure in their community (Figure 8).

About two-thirds of participants agreed that the clean energy industry could be a source of well-paying jobs for their community (66.6 percent), that they would approve siting of new clean energy infrastructure in their community (65.4 percent), and that energy production from renewable resources would reduce environmental pollution in their community (65.6 percent).

There was some concern among survey respondents about the possible employment losses that could result from a clean energy transition. Just over one-third of respondents agreed that moving to cleaner sources of energy production would result in job losses in their community (35.4 percent). Hispanic or Latino respondents were most concerned about the job losses associated with a clean energy transition — 10 percentage points higher than the overall average and 14 percentage points higher than non-Hispanic or Latino respondents.

Native Hawaiian respondents were most likely to indicate agreement with the benefits of clean energy technologies such as reduction in environmental pollution and approval of new infrastructure siting. Agreement amongst Native Hawaiian respondents was seven to 10 percentage points higher than the average for all respondents

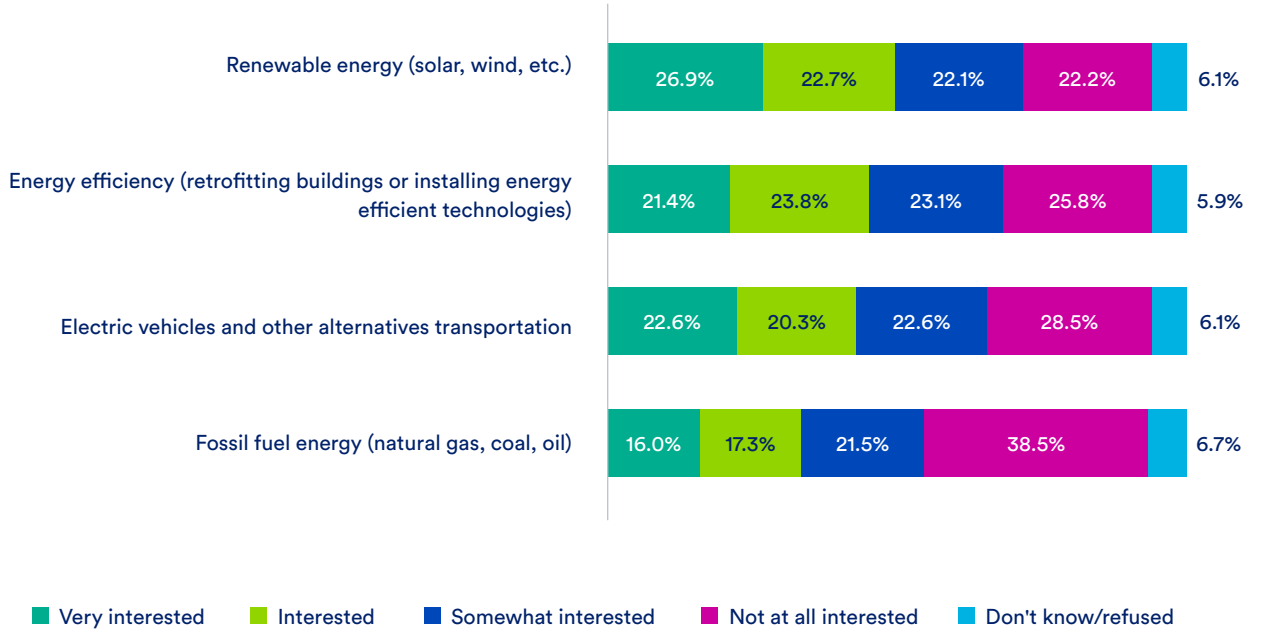
Figure 8: Clean Energy Industry Perceptions



Interest in clean energy careers was high, with at least 66 percent of respondents reporting some level of interest in building a career in the renewable energy, energy efficiency, or electric vehicle industries. The renewable energy sector garnered the highest level of interest from survey participants (71.7 percent), followed by energy efficiency (68.3 percent), and electric vehicles or alternative transportation (65.5 percent) (Figure 9).

About half of respondents also indicated some level of interest in building a career in the fossil fuel industry (54.8 percent).

Figure 9: Energy Career Interests



Despite notable interest in building a career in these clean energy industries, about three in five respondents have never considered working in the clean energy industry (62.7 percent) (Figure 10).

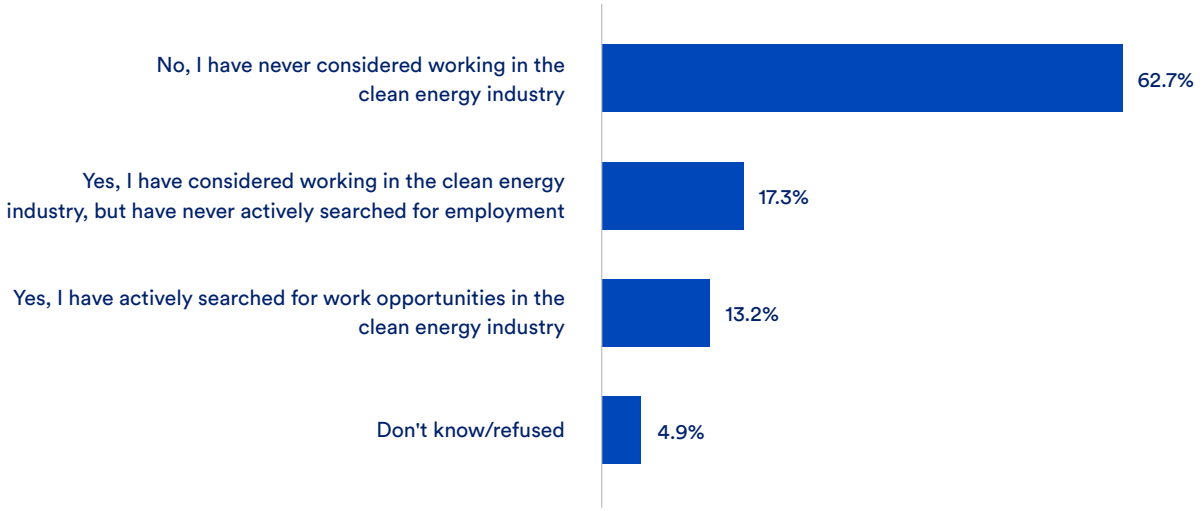
About 17 percent of respondents have considered working in the clean energy industry but never actively searched for employment, and 13.2 percent have actively searched for work opportunities.

Hispanic or Latino communities are most likely to have searched for clean energy employment opportunities; about a quarter (26.6 percent) indicated that they have actively searched for work opportunities in the clean energy industry, which is 13.4 percentage points higher than the average for all respondents and 18.8 percentage points higher than non-Hispanic or Latino respondents.

Among racial groups, Asian (14.1 percent) and White (41.1 percent) respondents were most likely to actively search for clean energy jobs.

Middle-income ($50,000 to $99,999) respondents were also more likely to indicate actively searching for clean energy job listings — roughly eight percentage points above the average for all respondents.

Figure 10: Clean Energy Career Considerations

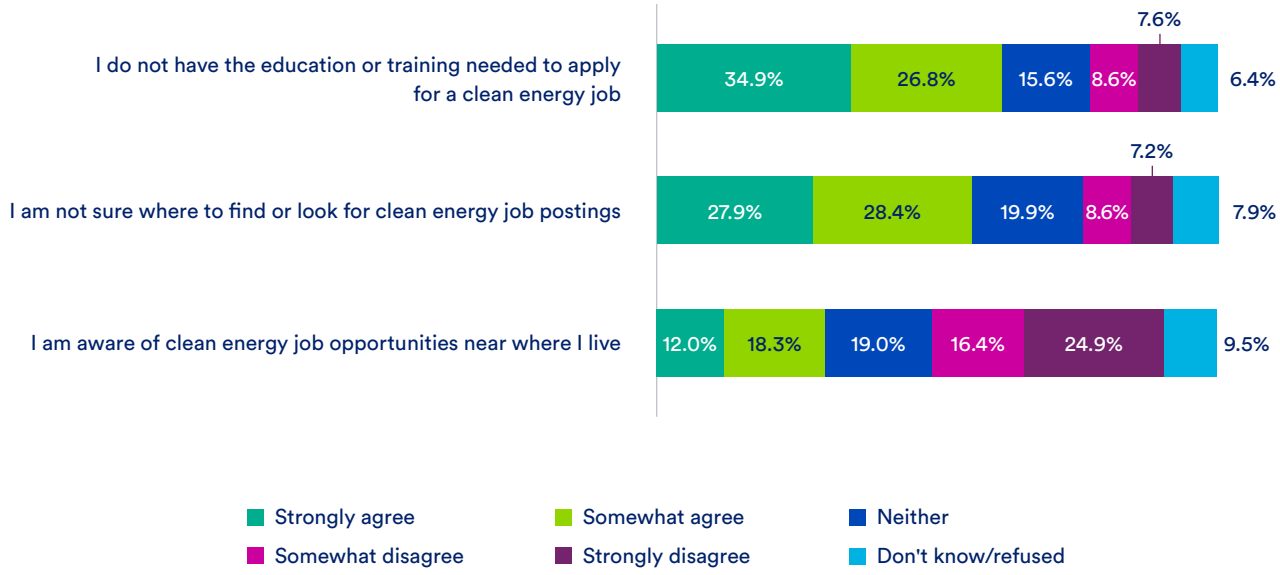


When asked about barriers to navigating the clean energy labor market, three in five survey respondents agreed that they do not have the proper education or training to qualify them to work in the clean energy industry (61.7 percent) and another three in five noted that they do not know where to find clean energy job listings (56.3 percent) (Figure 11).

Fewer than half of respondents are aware of clean energy job opportunities that are close to where they live; 30.3 percent of respondents were at least somewhat aware, while 41.3 percent were not.

Awareness of clean energy job opportunities that are close to respondents' places of residence was highest among Hispanic or Latino respondents — 14.2 percentage points above average.

Figure 11: Clean Energy Career Barriers



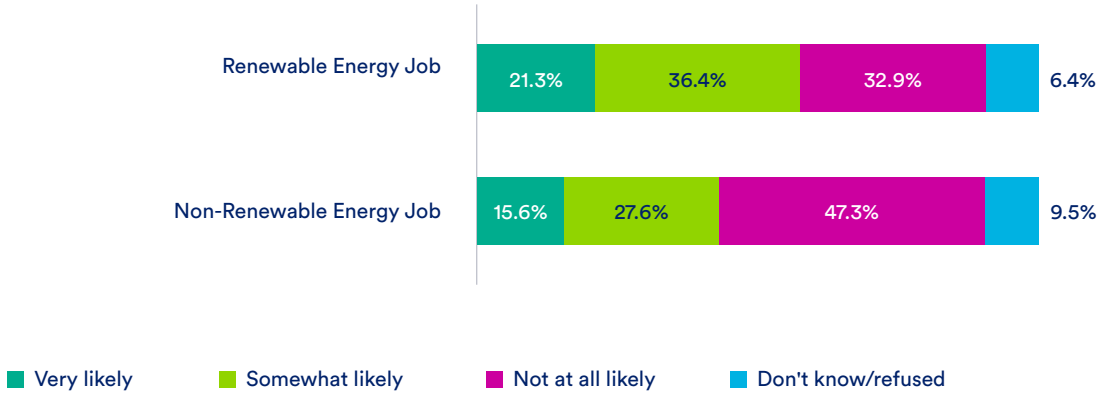
If participants came across a job listing in the renewable energy industry when searching for a new career or employment opportunity, more than half of the survey respondents reported that they would be "very" or "somewhat" likely to apply for this position (57.7 percent) (Figure 12).

The likelihood of applying for a fossil fuel job was lower compared to a renewable energy position, with 43.2 percent of respondents indicating they would be either "very" or "somewhat" likely to apply to a non-renewable energy job in the natural gas, nuclear, coal, or oil industries.

Black or African American, American Indian, Asian, and Native Hawaiian respondents were most likely to indicate likelihood of applying to a renewable energy job by seven to 14 percentage points above the average for all respondents. White respondents were least likely to indicate that they would apply for a renewable energy job (three percentage points below the average).

Hispanic or Latino communities were also more likely to indicate they would apply for a renewable energy position — 14 percentage points higher than the overall average and 20 percentage points higher than non-Hispanic or Latino respondents.

Figure 12: Likelihood of Applying to Renewable or Non-Renewable Energy Position



Civic Engagement, Trust, & Access to Information

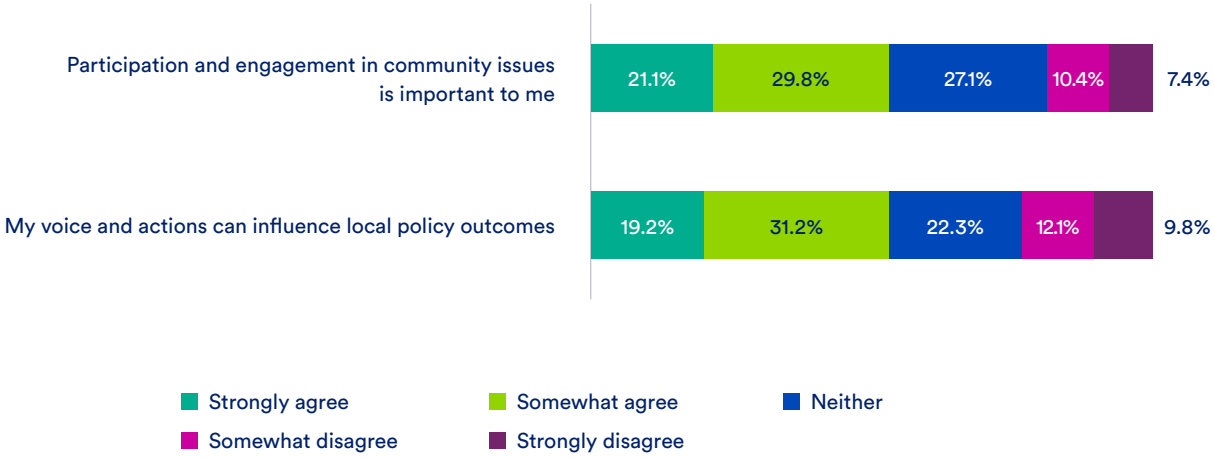
About half of survey participants agreed that both participation and engagement in community issues is important (50.9 percent) and that their voice can influence local policy outcomes (50.4 percent). However, 21.9 percent of respondents disagreed that their voice and actions are influential, and 17.8 percent also disagreed that participation and engagement in community issues is important to them. Both questions had over 20 percent of respondents remain neutral, with 27.1 percent remaining neutral on the question about participation, and 22.3 percent remaining neutral on the question about influencing policy (Figure 13).

Compared to the overall average and to the average for non-Hispanic or Latino respondents, Hispanic or Latino respondents were 13 to 18 percentage points more likely to agree with the statements that participation and engagement in community issues is important and that their voice can influence local policy outcomes

Middle-income earners were also more likely to agree with these statements by about five to six percentage points compared to the overall average.

Across racial groups, Black or African American respondents were most likely to agree with these sentiments — nine percentage points higher than overall average.

Figure 13: Civic Engagement Importance & Influence



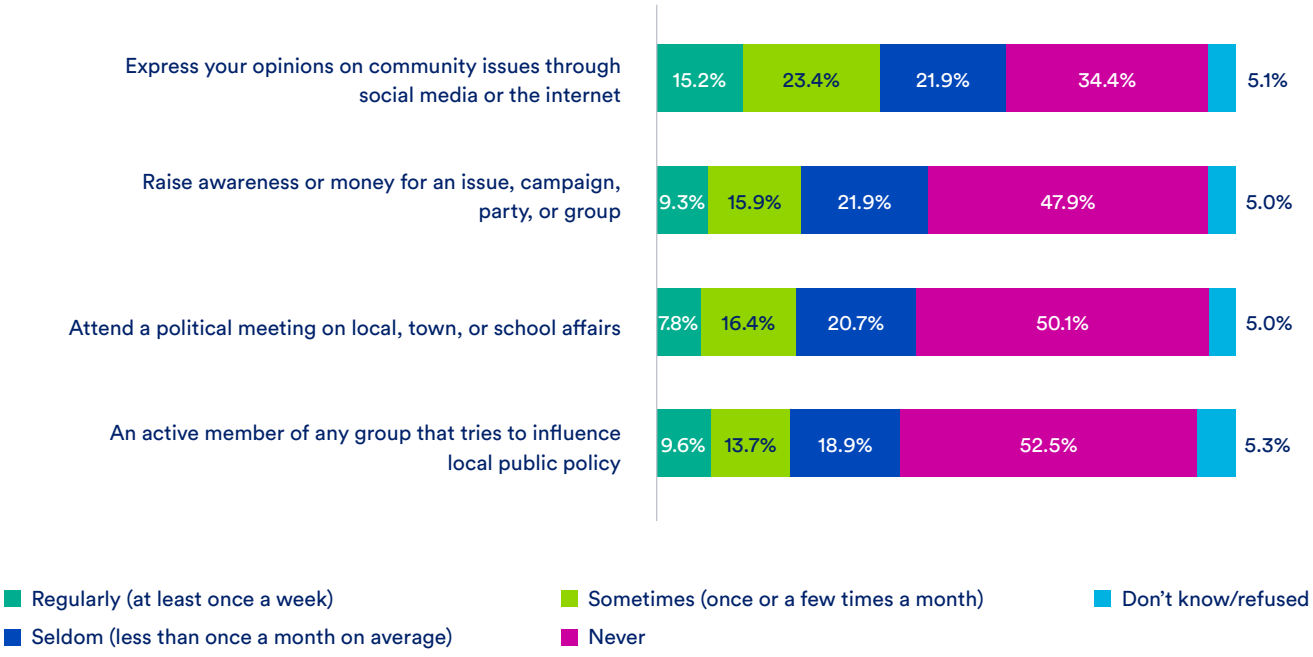
Despite feeling confident in local influence and the importance of civic engagement, few individuals indicated frequent participation in various types of civic engagement activities. In general, fewer than 20 percent of individuals indicated that they regularly (defined as "at least once a week") express their political or social opinions, raise awareness or money for issues or campaigns, attend political meetings, or join groups working to influence public policy (Figure 14).

The most common type of civic engagement was through social media or the Internet, with 38.6 percent of survey respondents reporting that they either "regularly" or "sometimes" express their opinions on community issues via the Internet. About a quarter of respondents also raised awareness or money for a cause (25.2 percent), attended political meetings (24.2 percent) or were an active member of a local political action group (23.3 percent) at least a few times a month.

Hispanic or Latino respondents were most likely to report regular civic engagement or participation across all types of tested activities — between six and 11 percentage points higher than the overall average and average for non-Hispanic or Latino participants.

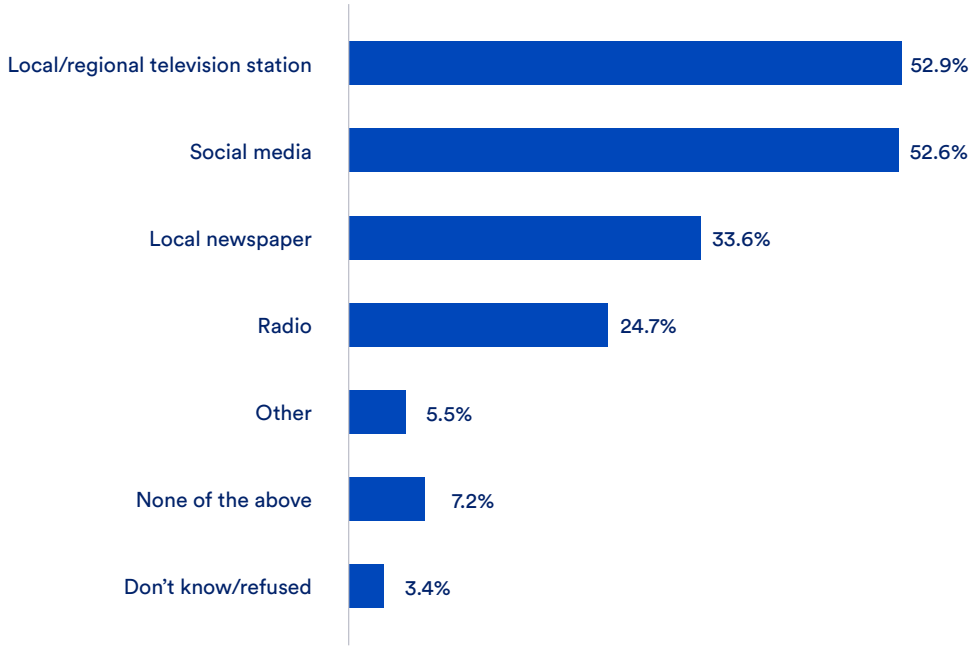
Among income groups, higher-income earners ($50,000 or more) were also most likely to regularly report civic engagement.

Figure 14: Frequency of Civic Engagement



More than half of respondents indicated that they rely on local or regional television (52.9 percent) and social media (52.6 percent) for information on local environmental issues. A third or fewer of respondents get information from the local newspaper (33.6 percent) and radio stations (24.7 percent) (Figure 15).

Figure 15: Environmental Information News Sources

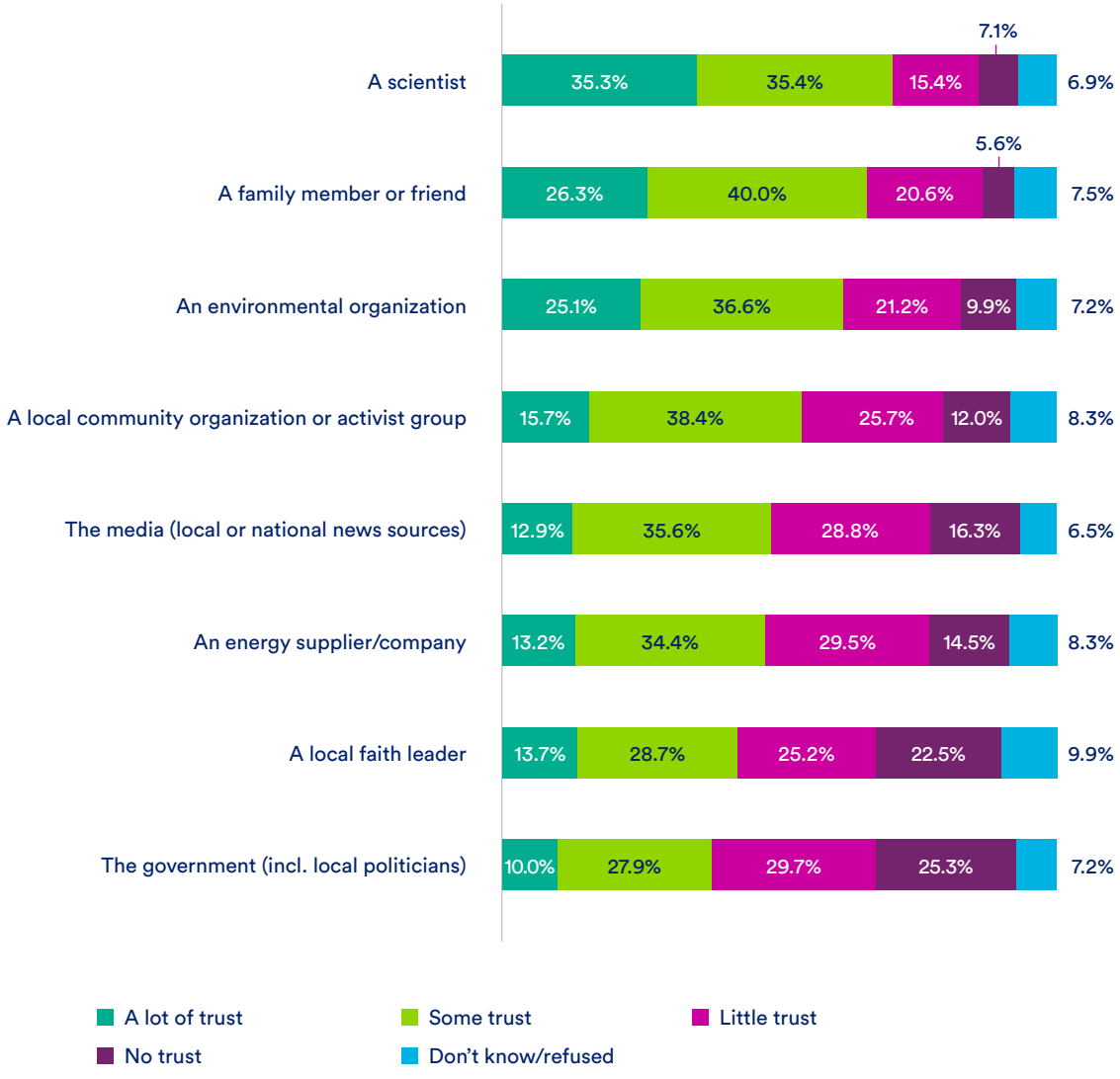


Scientists, news from family members or friends, an environmental organization, or a local community organization or activist group are the most trusted sources of information related to environmental issues. At least half of respondents indicated that they have either "a lot of trust" or "some trust" in these sources (Figure 16).

The media garnered at least some trust as a source for environmental information from 48.5 percent of respondents, followed by an energy supplier or company (47.6 percent), a local faith leader (42.4 percent), and the government (37.9 percent).

In general, Hispanic or Latino respondents were most likely to indicate trust across all sources of information compared to non-Hispanic or Latino respondents (between two to 19 percentage points higher). Urban communities were also more likely to indicate trust compared to rural communities (between one to 10 percentage points higher). Respondents earning $100,000 or more a year were 13 percentage points more likely to trust a scientist and 10 percentage points more likely to trust a family member or friend, compared to the overall average.

Figure 16: Trust for Various Information Sources



Accessibility Barriers

The majority of respondents agreed that the cost of electricity is too high (76.4 percent) and only 13 percent reported awareness of any programs, resources, incentives, or rebates that can help reduce the cost of electricity. Of those who were aware of such resources, respondents indicated awareness of home energy assistance programs, solar panel incentives, local electric company incentives or programs, weatherization and energy efficiency programs, and general energy conservation programs.

About 27 percent of respondents agreed that their household has limited or intermittent access to electricity (27.3 percent) (Figure 17 and Figure 18).

Figure 17: Electricity Cost & Access

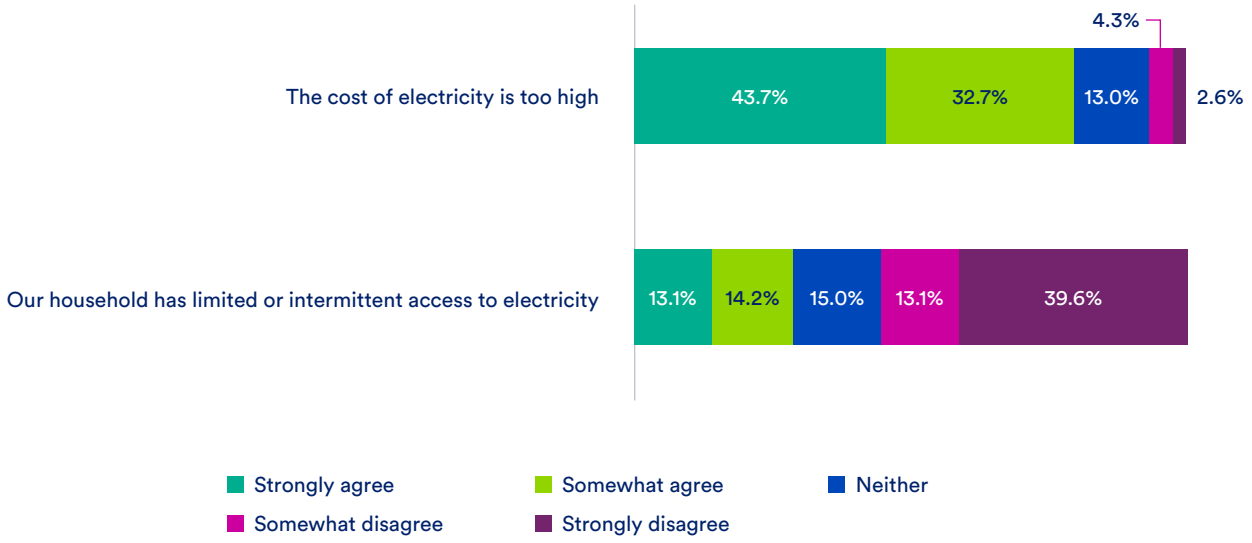
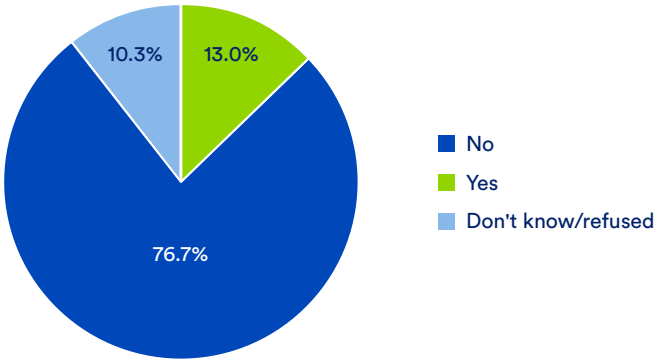


Figure 18: Electricity Cost Reduction Awareness



When asked to rate the level of challenge for the certain obstacles with regards to finding employment or advancing a career, participants were most likely to highly rank insufficient financial resources or security (63.7 percent), getting the relevant work or industry experience (59.9 percent), getting the academic degree or certifications required (57.9 percent), and having access to professional resources or networks (52.9 percent) (Figure 19).

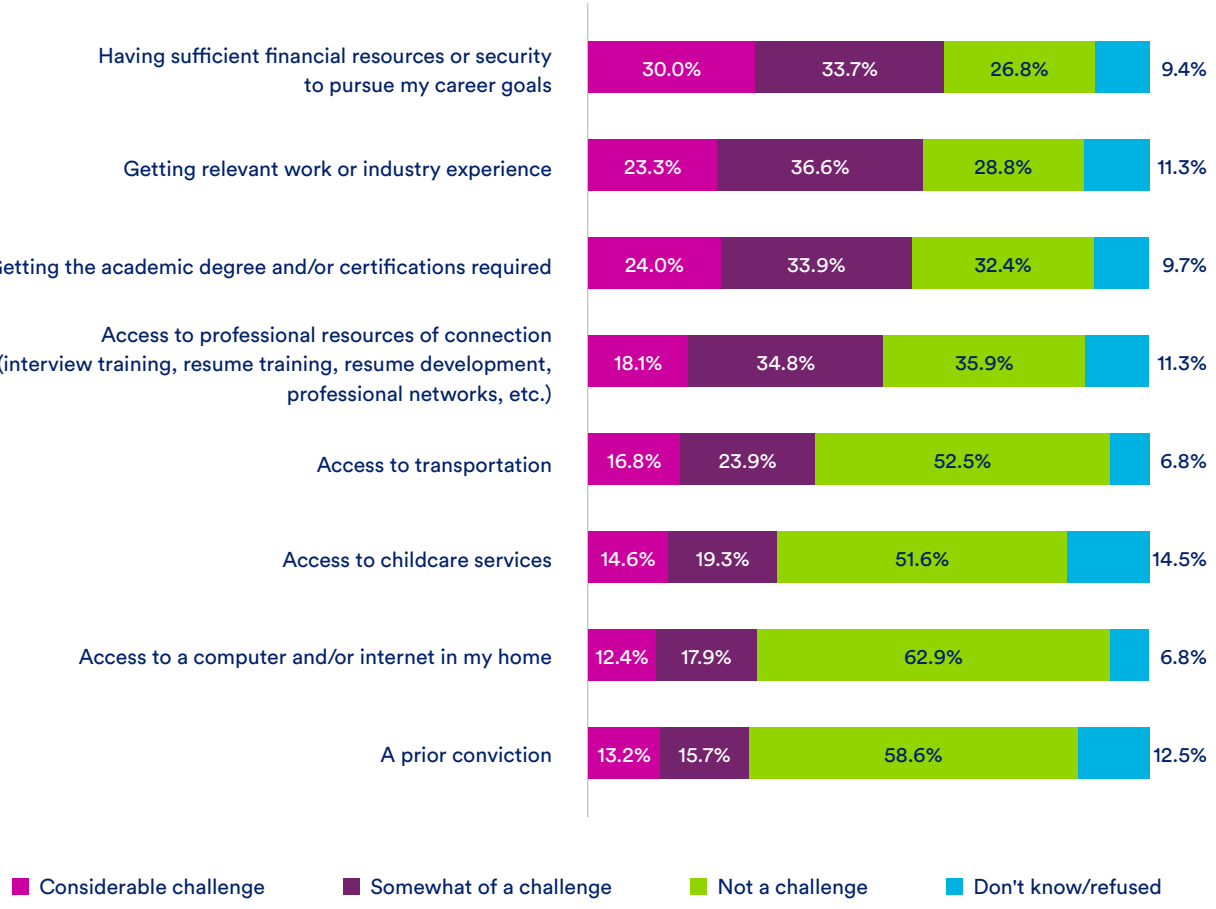
A third of more of respondents indicated that access to transportation (40.7 percent) and childcare services (33.9 percent) are challenges, and about three –in ten respondents noted access to a computer or internet in their home (30.3 percent) or a prior conviction (28.9 percent) as a challenge to career navigation.

In general, Hispanic or Latino respondents were more likely to indicate challenges across each of the tested metrics compared to non-Hispanic or Latino participants — 13 to 24 percentage points higher.

Individuals earning $100,000 or more a year were likely to agree that these challenges pose a barrier to finding employment or advancing a career.

With regards to differences by race, Native Hawaiian respondents were most likely to indicate that one or more of the following have been barriers to career advancement: getting relevant work or industry experience, having the sufficient financial resources or security to pursue career goals, access to childcare services, and access to transportation.

Figure 19: Career Advancement Challenges



Mosaic Faustina Ammonia Plant, St. James, LA

SECTION 4

Community Survey Toplines

Climate Equity Community Survey, n=3,012

Introduction

Hi, my name is _____ and I am with an independent research firm calling on behalf of Clean Air Task Force (CATF) to conduct a survey about energy in your community. CATF would like to better understand communities' needs and challenges especially regarding environmental and energy impacts. This survey is part of CATF's research to develop a better understanding of how new policies can improve communities' overall health and economic vitality.

This survey should only take about 15 minutes of your time, and all of your responses will remain strictly confidential. Upon completion, you will receive a $25 gift card of your choice for Visa, Target, or Wal-Mart.

[IF NEEDED]: I assure you that we are an independent research agency and that all of your responses will remain strictly confidential.

[IF NEEDED]: This is a study about issues of importance in your community — it is a survey only and we are not selling anything.

[IF THE INDIVIDUAL MENTIONS THE NATIONAL DO NOT CALL LIST, RESPOND ACCORDING TO AMERICAN MARKETING ASSOCIATION GUIDELINES)]: Most types of opinion and marketing research studies are exempt under the law passed by Congress. That law was passed to regulate the activities of the telemarketing industry. This is a legitimate research call. Your opinions count!

It should be noted that because the survey results were weighted, for questions with skip patterns, the n's reported for each question may not be equivalent to the expected n based on the percentage calculation.

Section 1. Demographic Screener Questions

First, we would like to collect some general information from you to see if you qualify for the survey.

A. In which zip code do you reside? _ _ _ _ _ (n=2,992)

- 22.0% South Atlantic
- 15.5% East North Central
- 13.9% Middle Atlantic
- 12.5% West South Central
- 12.2% Pacific
- 9.4% Mountain
- 5.8% East South Central
- 5.7% West North Central
- 3.1% New England

B. What is your age?

- 0.0% Less than 18 years old
- 12.0% 18 to 24 years old
- 8.4% 25 to 29 years old
- 9.3% 30 to 34 years old
- 17.3% 35 to 44 years old
- 32.2% 45 to 64 years old
- 20.9% 65 years or older

C. What is your gender?

- 58.7% Female
- 38.8% Male
- 1.8% Gender Non-Binary
- 0.3% Other (please specify)
- 0.4% Prefer not to answer

D. Please select your highest level of education.

- 1.2% Up to 8th grade
- 38.7% From 9th grade up to 11th grade
- 11.7% High school diploma or GED
- 15.6% Vocational technical training or certification
- 18.9% Associate's degree
- 9.8% Bachelor's degree
- 4.1% Master's degree or higher

E. Are you currently employed?

- 38.5% Yes, full-time
- 14.1% Yes, part-time
- 47.4% No, I am not currently working

F. Do you identify as Hispanic?

- 28.5% Yes
- 71.5% No

G. Which of the following race(s) do you identify with most? [MULTIPLE CHOICE - SELECT ALL THAT APPLY] - Multiple responses permitted; percentages may sum to more than 100%

- 73.0% White
- 15.6% Black or African American
- 9.9% American Indian or Alaskan Native
- 3.4% Asian
- 1.3% Native Hawaiian or other Pacific Islander
- 7.9% Other

H. Do you live in:

- 40.3% The City/ Urban Area
- 37.5% A Suburban Area/ Outside the City
- 22.2% The Country/ Rural Area

I. Do you rent or own your current residence?

- 51.8% Own
- 48.2% Rent

[IF SCREENER I = "Rent", ASK SCREENER J, OTHERWISE SKIP]

J. Do you receive a rental subsidy? [IF NEEDED: Some form of financial support for rental costs] (n=1,540)

- 18.0% Yes
- 82.0% No

K. Which of the following best describes your current home?

- 51.8% Single family detached home
- 30.0% Apartment
- 8.2% Condominium or town home
- 8.2% Mobile home
- 1.8% Other

L. Is there more than one family living in your current household?

- 20.5% Yes
- 79.5% No

M. How long have you lived in your current home?

- 42.6% 0-5 years
- 21.7% 5-10 years
- 18.0% 10-20 years
- 17.6% More than 20 years

N What is your primary language spoken at home? [DO NOT READ]

- 91.2% English
- 7.7% Spanish
- 0.1% Chinese (Cantonese, Mandarin, etc.)
- 0.1% Korean
- 0.1% Tagalog
- 0.1% Portuguese
- 0.0% French or French Creole
- 0.0% Amharic
- 0.0% Arabic
- 0.0% Vietnamese
- 0.5% Other

Section 2. Environmental and Health Impacts – Awareness, Perceptions, & Concerns

1. Are you concerned about any specific environmental issues in your community?

- 37.7% Yes
- 53.7% No
- 8.5% Don't know/ Refused

[IF Q1 = "Yes", ASK Q2, OTHERWISE SKIP]

2. Please provide up to two (2) environmental issues you are concerned with. Multiple responses permitted; percentages may sum to more than 100% (n=1,154). Responses were unaided, meaning respondents were not offered a list, but rather volunteered concerns which were then coded and grouped by the research team.

- 32.8% Waste/ garbage
- 25.2% Water quality
- 23.4% Climate change/ Global warming
- 20.0% Air quality
- 10.9% Extreme weather events (floods, hurricanes, droughts, etc.)
- 7.1% Pollution from industrial refineries (incl. energy production)
- 4.9% Deforestation
- 4.2% Car/ truck emissions
- 1.1% Industrial mining and extraction (incl. abandoned mines)
- 0.8% Agricultural pesticides
- 7.8% Other
- 28.3% Don't know/ Refused

3. Please indicate your level of concern for each of the following environmental issues as they relate to your community. [RANDOMIZE]

3A. Water quality and access to clean water (water supply, lead pipes, contamination)

- 35.1% Very concerned
- 30.7% Somewhat concerned
- 15.4% Not at all concerned
- 16.1% Not an issue in my community
- 2.8% Don't know/ Refused

3B. Air quality (pollution, emissions, dust, vehicle exhaust)

- 32.8% Very concerned
- 34.5% Somewhat concerned
- 16.9% Not at all concerned
- 12.9% Not an issue in my community
- 2.8% Don't know/ Refused

3C. Severe weather events (sea level rise, heat waves, droughts, storms, hurricanes, floods)

- 30.6% Very concerned
- 37.0% Somewhat concerned
- 16.4% Not at all concerned
- 13.1% Not an issue in my community
- 2.8% Don't know/ Refused

4. Please indicate if any of the following environmental issues affect your health, safety, and security or the health, safety, and security of someone in your household. [RANDOMIZE]

4A. Water quality and access to clean water (water supply, lead pipes, contamination)

- 24.3% Major effect
- 23.2% Moderate effect
- 17.5% Minor effect
- 29.8% No effect
- 5.1% Don't know/ Refused

4B. Air quality (pollution, emissions, dust, vehicle exhaust)

- 24.4% Major effect
- 27.1% Moderate effect
- 20.5% Minor effect
- 23.4% No effect
- 4.6% Don't know/ Refused

4C. Severe weather events (sea level rise, heat waves, droughts, storms, hurricanes, floods)

- 23.0% Major effect
- 26.3% Moderate effect
- 21.6% Minor effect
- 24.9% No effect
- 4.1% Don't know/ Refused

5. Have you ever experienced one of the following severe weather events in your community? [SELECT ALL THAT APPLY] – Multiple responses permitted; percentages may sum to more than 100%

- 59.8% Storms
- 43.5% Heat waves
- 36.0% Droughts
- 31.9% Floods
- 25.7% Hurricanes
- 6.3% No, I have never experienced a severe weather event in my community
- 3.1% Other
- 1.0% Don't know/ Refused

6. Please indicate your level of agreement with the following statements. [RANDOMIZE]

6A. Environmental pollutants in my community have affected my health or the health of individuals in my household or neighborhood

- 20.4% Strongly agree
- 26.2% Somewhat agree
- 22.8% Neither
- 10.6% Somewhat disagree
- 14.4% Strongly disagree
- 5.6% Don't know/ Refused

6B. I am concerned about the health effects of environmental pollutants in my community

- 29.7% Strongly agree
- 33.0% Somewhat agree
- 17.5% Neither
- 7.9% Somewhat disagree
- 8.5% Strongly disagree
- 3.5% Don't know/ Refused

Section 3. Economic Opportunity, Trust, & Perceptions

7. Which of the following clean energy technologies are you aware of or familiar with? [SELECT ALL THAT APPLY] – Multiple responses permitted; percentages may sum to more than 100% [RANDOMIZE]

- 72.0% Solar
- 61.4% Wind
- 57.5% Electric vehicles (incl. other alternative transportation)
- 47.0% Energy Efficiency
- 37.1% Hydropower
- 23.9% Energy storage
- 14.0% Grid modernization technologies (smart grid and microgrids)
- 14.0% Advanced nuclear
- 12.9% Carbon capture technologies
- 11.5% Green hydrogen
- 7.3% None of the above
- 3.6% Don't know/ Refused

8. If you were looking for a new job or career, how interested would you be in building a career in the following industries? [RANDOMIZE]

8A. Renewable energy (solar, wind, etc.)

- 26.9% Very interested
- 22.7% Interested
- 22.1% Somewhat interested
- 22.2% Not at all interested
- 6.1% Don't know/ Refused

8B. Electric vehicles and other alternative transportation

- 22.6% Very interested
- 20.3% Interested
- 22.6% Somewhat interested
- 28.5% Not at all interested
- 6.1% Don't know/ Refused

8C. Energy efficiency (retrofitting buildings or installing energy efficient technologies)

- 21.4% Very interested
- 23.8% Interested
- 23.1% Somewhat interested
- 25.8% Not at all interested
- 5.9% Don't know/ Refused

8D. Fossil fuel energy (natural gas, coal, oil)

- 16.0% Very interested
- 17.3% Interested
- 21.5% Somewhat interested
- 38.5% Not at all interested
- 6.7% Don't know/ Refused

9. Have you ever considered and/or looked for employment in the clean energy industry? [IF NEEDED: This includes renewable energy, electric vehicles, energy efficiency, or energy storage and grid modernization]

- 13.2% Yes, I have actively searched for work o pportunities in the clean energy industry
- 17.3% Yes, I have considered working in the clean energy industry, but have never actively searched for employment
- 62.7% No, I have never considered working in the clean energy industry
- 6.7% Don't know/ Refused

10. Please indicate your level of agreement with the following statements. [RANDOMIZE]

10A. I am aware of clean energy job opportunities near where I live

- 33.0% Strongly agree
- 32.6% Somewhat agree
- 17.9% Neither
- 5.0% Somewhat disagree
- 3.2% Strongly disagree
- 8.3% Don't know/ Refused

10B. The transition to cleaner sources of energy production would result in job losses in my community

- 14.2% Strongly agree
- 21.2% Somewhat agree
- 22.8% Neither
- 16.4% Somewhat disagree
- 12.9% Strongly disagree
- 12.5% Don't know/ Refused

10C. I would approve of siting new clean energy infrastructure in my community

- 32.2% Strongly agree
- 33.2% Somewhat agree
- 19.3% Neither
- 4.0% Somewhat disagree
- 3.1% Strongly disagree
- 8.2% Don't know/ Refused

10D. The clean energy industry could be a source of well-paying jobs for my community

- 33.5% Strongly agree
- 33.1% Somewhat agree
- 16.8% Neither
- 5.5% Somewhat disagree
- 2.7% Strongly disagree
- 8.4% Don't know/ Refused

Section 4. Civic Engagement & Access to Information

14. How often do you participate in each of the following activities? [RANDOMIZE]

14A. An active member of any group that tries to influence local public policy

- 9.6% Regularly (at least once a week)
- 13.7% Sometimes (once or a few times a month)
- 18.9% Seldom (less than once a month on average)
- 52.5% Never
- 5.3% Don't know/ Refused

10B. Raise awareness or money for an issue, campaign, party, or group

- 9.3% Regularly (at least once a week)
- 15.9% Sometimes (once or a few times a month)
- 21.9% Seldom (less than once a month on average)
- 47.9% Never
- 5.0% Don't know/ Refused

10C. Attend a political meeting on local, town, or school affairs

- 7.8% Regularly (at least once a week)
- 16.4% Sometimes (once or a few times a month)
- 20.7% Seldom (less than once a month on average)
- 50.1% Never
- 5.0% Don't know/ Refused

10D. Express your opinions on community issues through social media or the Internet

- 15.2% Regularly (at least once a week)
- 23.4% Sometimes (once or a few times a month)
- 21.9% Seldom (less than once a month on average)
- 34.4% Never
- 5.1% Don't know/ Refused

15. Where do you get information about local environmental issues? [SELECT ALL THAT APPLY] – Multiple responses permitted; percentages may sum to more than 100%

- 52.9% Local/ regional television station
- 52.6% Social media
- 33.6% Local newspaper
- 24.7% Radio
- 5.5% Other
- 7.2% None of the above
- 3.4% Don't know/ Refused

16. Please indicate your level of agreement with the following statements. [RANDOMIZE]

16A. Participation and engagement in community issues is important to me

- 21.1% Strongly agree
- 29.8% Somewhat agree
- 27.1% Neither
- 10.4% Somewhat disagree
- 7.4% Strongly disagree
- 4.2% Don't know/ Refused

16B. My voice and actions can influence local policy outcomes

- 19.2% Strongly agree
- 31.2% Somewhat agree
- 22.3% Neither
- 12.1% Somewhat disagree
- 9.8% Strongly disagree
- 5.4% Don't know/ Refused

17. Please indicate your level of trust if you were to receive information regarding environmental issues in your community from each of the following. [RANDOMIZE]

17A. A family member or friend

- 26.3% A lot of trust
- 40.0% Some trust
- 20.6% Little trust
- 5.6% No trust
- 7.5% Don't know/ Refused

17B. A scientist

- 35.3% A lot of trust
- 35.4% Some trust
- 15.4% Little trust
- 7.1% No trust
- 6.9% Don't know/ Refused

17C. The government (incl. local politicians)

- 10.0% A lot of trust
- 27.9% Some trust
- 29.7% Little trust
- 25.3% No trust
- 7.2% Don't know/ Refused

17D. An energy supplier/ company

- 13.2% A lot of trust
- 34.4% Some trust
- 29.5% Little trust
- 14.5% No trust
- 8.3% Don't know/ Refused

17E. An environmental organization

- 25.1% A lot of trust
- 36.6% Some trust
- 21.2% Little trust
- 9.9% No trust
- 7.2% Don't know/ Refused

17F. A local community organization or activist group

- 15.7% A lot of trust
- 38.4% Some trust
- 25.7% Little trust
- 12.0% No trust
- 8.3% Don't know/ Refused

17G. A local faith leader

- 13.7% A lot of trust
- 28.7% Some trust
- 25.2% Little trust
- 22.5% No trust
- 9.9% Don't know/ Refused

17H. The media (local or national news sources)

- 12.9% A lot of trust
- 35.6% Some trust
- 28.8% Little trust
- 16.3% No trust
- 6.5% Don't know/ Refused

Section 5. Accessibility Barriers

18. Please indicate your level of agreement with the following statements. [RANDOMIZE]

18A. Our household has limited or intermittent access to electricity

- 13.1% Strongly agree
- 14.2% Somewhat agree
- 15.0% Neither
- 13.1% Somewhat disagree
- 39.6% Strongly disagree
- 5.0% Don't know/ Refused

18B. The cost of electricity is too high

- 43.7% Strongly agree
- 32.7% Somewhat agree
- 13.0% Neither
- 4.3% Somewhat disagree
- 2.6% Strongly disagree
- 3.6% Don't know/ Refused

19. Are you aware of any programs, resources, incentives, or rebates that can help reduce the cost of electricity for your household?

- 13.0% Yes
- 76.7% No
- 10.3% Don't know/ Refused

Yes:

- 28.3% Solar panel incentives
- 23.6% Local electric companies' incentives/ programs
- 21.4% Home energy assistance programs
- 11.7% Weatherization and energy efficiency programs
- 3.4% General energy conservation
- 11.5% Other

20. Please rate the following challenges or obstacles with regards to finding employment or advancing your career. [RANDOMIZE]

20A. Having sufficient financial resources or security to pursue my career goals

- 30.0% Considerable challenge
- 33.7% omewhat of a challenge
- 26.8% Not a challenge
- 9.4% Don't know/ Refused

20B. Access to transportation

- 16.8% Considerable challenge
- 23.9% omewhat of a challenge
- 52.5% Not a challenge
- 6.8% Don't know/ Refused

20C. Access to childcare services

- 14.6% Considerable challenge
- 19.3% omewhat of a challenge
- 51.6% Not a challenge
- 14.5% Don't know/ Refused

20D. Access to a computer and/or internet in my home

- 12.4% Considerable challenge
- 17.9% omewhat of a challenge
- 62.9% Not a challenge
- 6.8% Don't know/ Refused

20E. Getting the academic degree and/or certifications required

- 24.0% Considerable challenge
- 33.9% omewhat of a challenge
- 32.4% Not a challenge
- 9.7% Don't know/ Refused

20F. Getting relevant work or industry experience

- 23.3% Considerable challenge
- 36.6% omewhat of a challenge
- 28.8% Not a challenge
- 11.3% Don't know/ Refused

20G. Access to professional resources or connections (interview training, resume development, professional networks, etc.)

- 18.1% Considerable challenge
- 34.8% omewhat of a challenge
- 35.9% Not a challenge
- 11.3% Don't know/ Refused

20H. A prior conviction

- 13.2% Considerable challenge
- 15.7% omewhat of a challenge
- 58.6% Not a challenge
- 12.5% Don't know/ Refused

21. What is your annual household income?

- 27.9% Below $25,000
- 33.0% $25,000 to $49,999
- 24.2% $50,000 to $74,999
- 5.3% $75,000 to $99,999
- 3.8% $100,000 to $150,000
- 3.0% More than $150,000
- 2.9% Don't know/ Refused

Trucks, Ironbound Community, Newark, NJ

SECTION 5

Community Survey Cross-Tabulation Data Charts

Environmental & Health Impacts

Q1. Are you concerned about any specific environmental issues in your community?

Figure 20: Overall Environmental Concern By Race

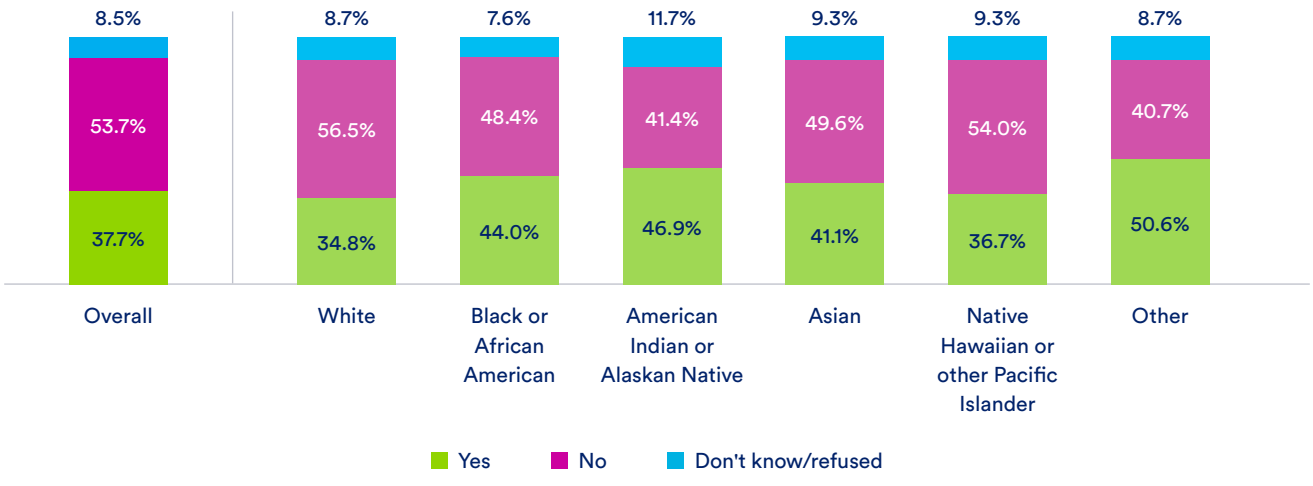


Figure 21: Overall Environmental Concern By Ethnicity

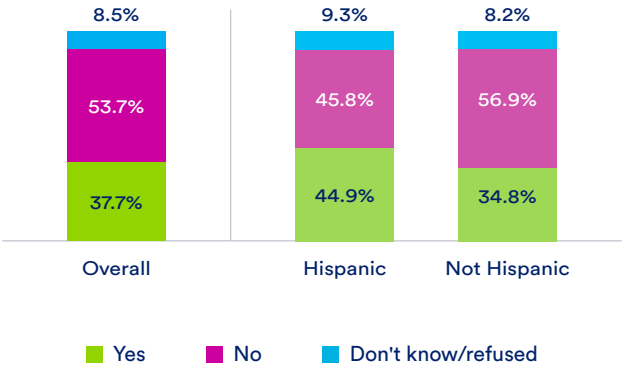


Figure 22: Overall Environmental Concern By Income Level[8]

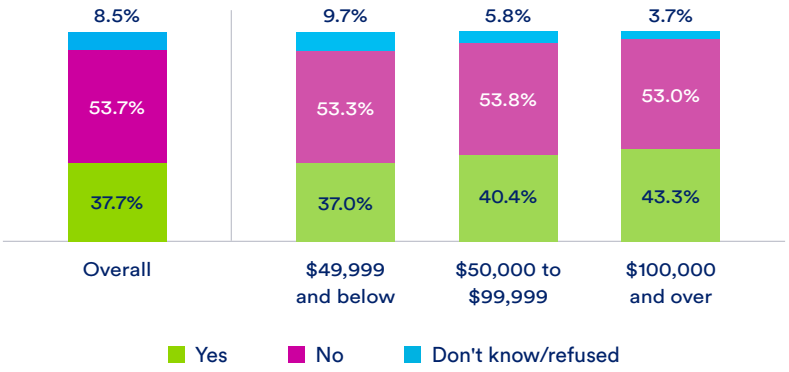
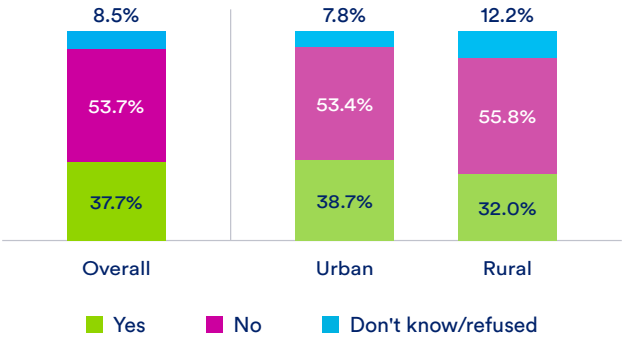


Figure 23: Overall Environmental Concern By Place of Residence[9]



[8] The cross-tabulation for the income question omits the option "Don't know/ Refused".

[9] The cross-tabulation for "Urban" and "Rural" includes only respondents who provided a zip code, where as "Overall" includes all respondents.

Q3. Please indicate your level of concern for each of the following environmental issues as they relate to your community.

Figure 24: "Very" or "Somewhat" Concerned with Specific Environmental Issues By Race

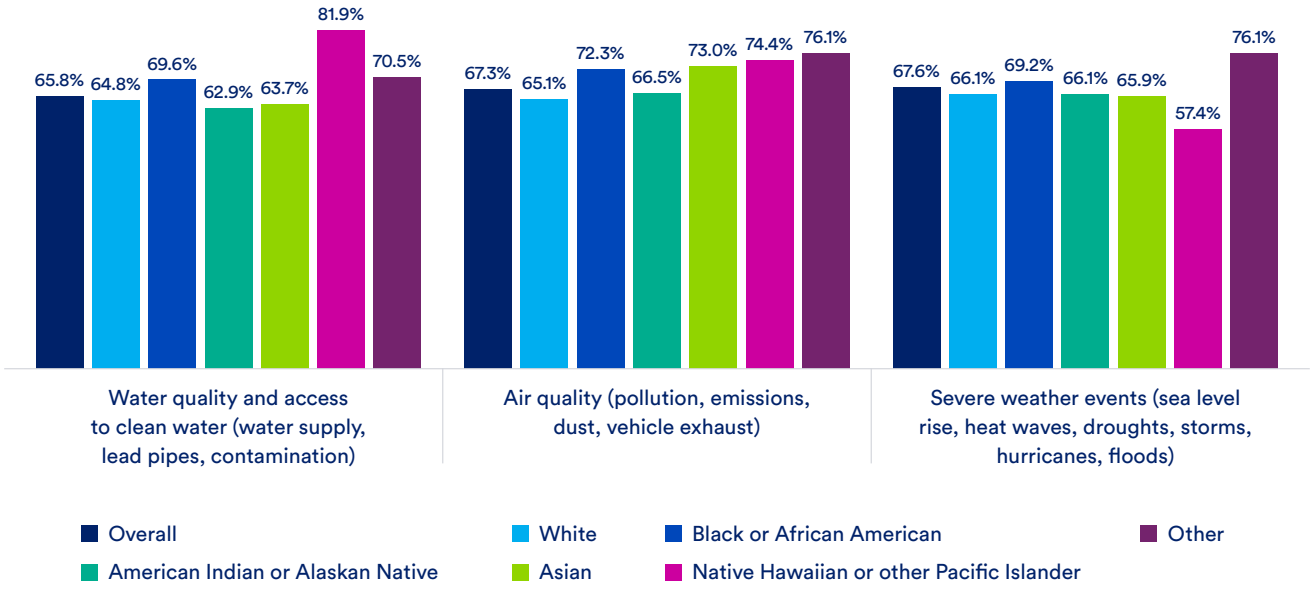


Figure 25: "Very" or "Somewhat" Concerned with Specific Environmental Issues By Ethnicity

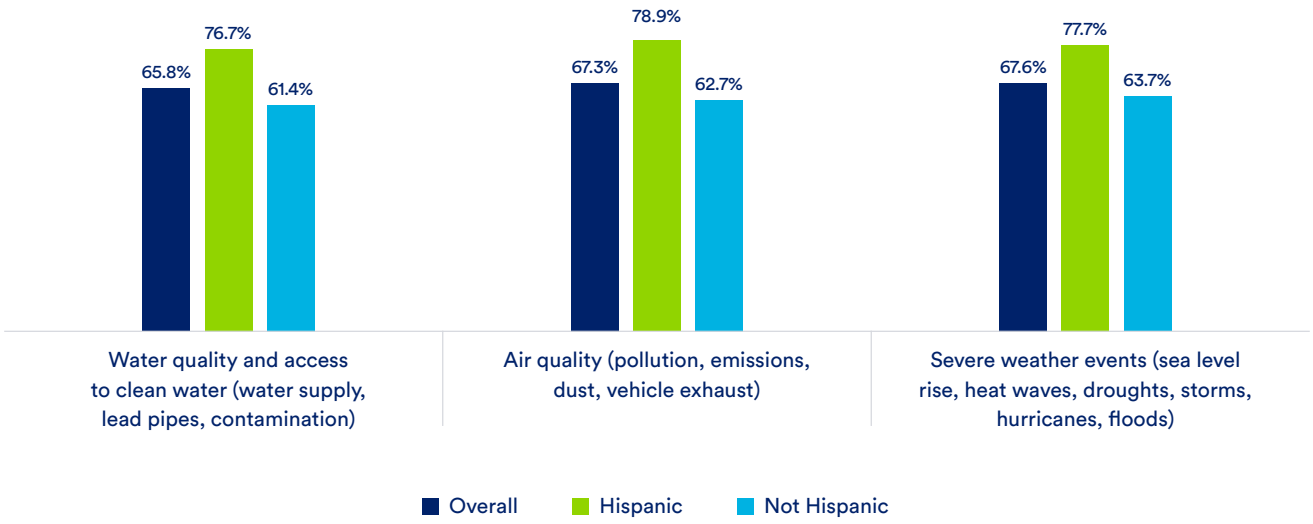


Figure 26: "Very" or "Somewhat" Concerned with Specific Environmental Issues (Aided) By Income Level[10]

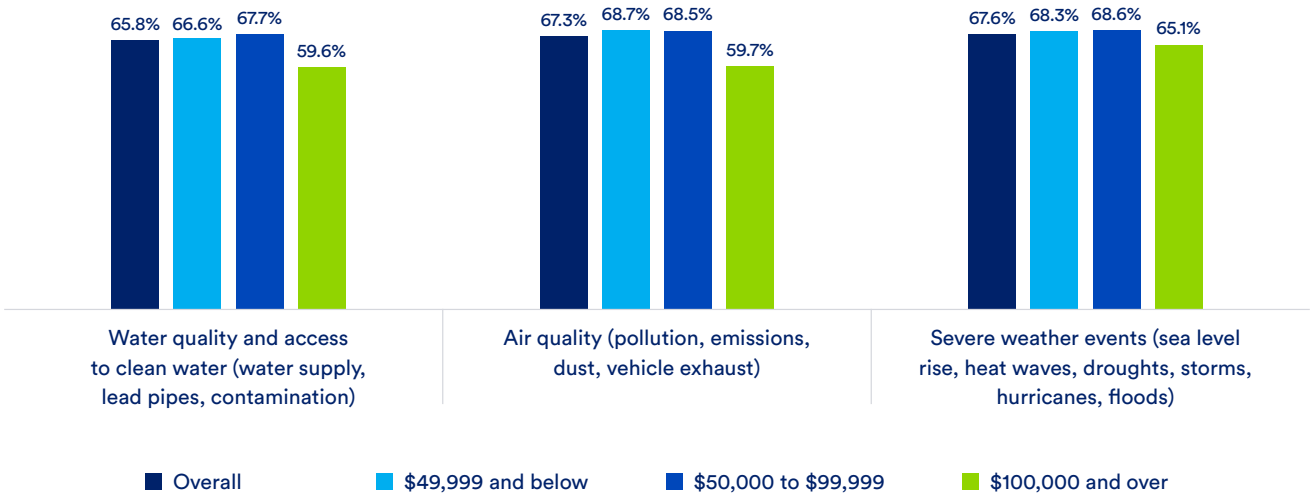
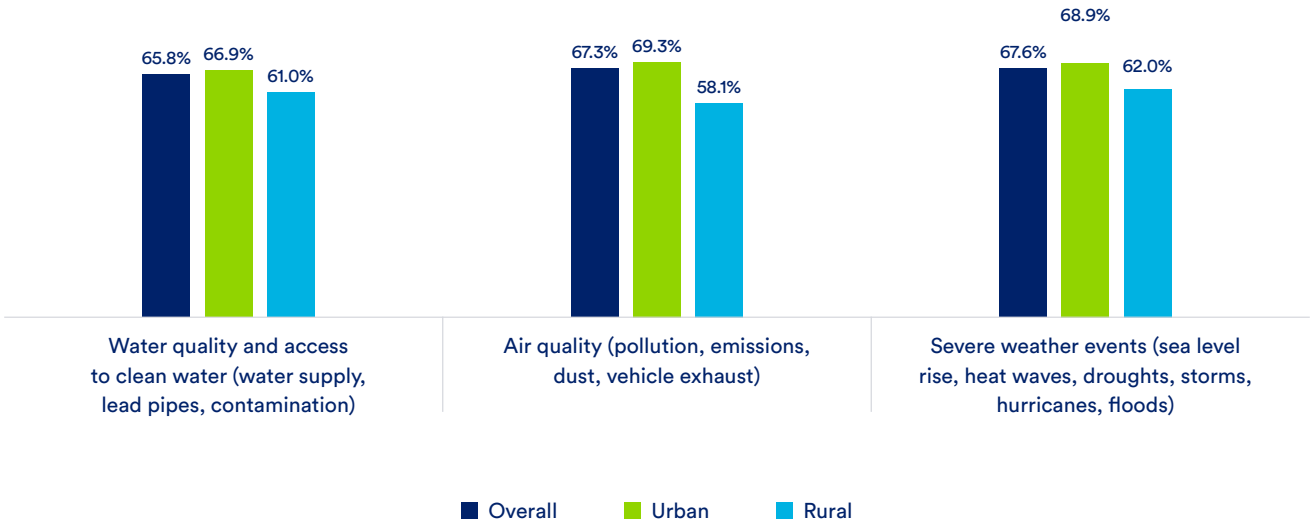


Figure 27: "Very" or "Somewhat" Concerned with Specific Environmental Issues (Aided) By Place of Residence[11]



[10] The cross-tabulation for the income question omits the option "Don't know/ Refused".

[11] The cross-tabulation for "Urban" and "Rural" includes only respondents who provided a zip code, where as "Overall" includes all respondents.

Q4. Do any of the following environmental issues affect your health, safety, and security or the health, safety, and security of someone in your household?

Figure 28: "Major" Or "Moderate" Effect of Health Impacts by Race

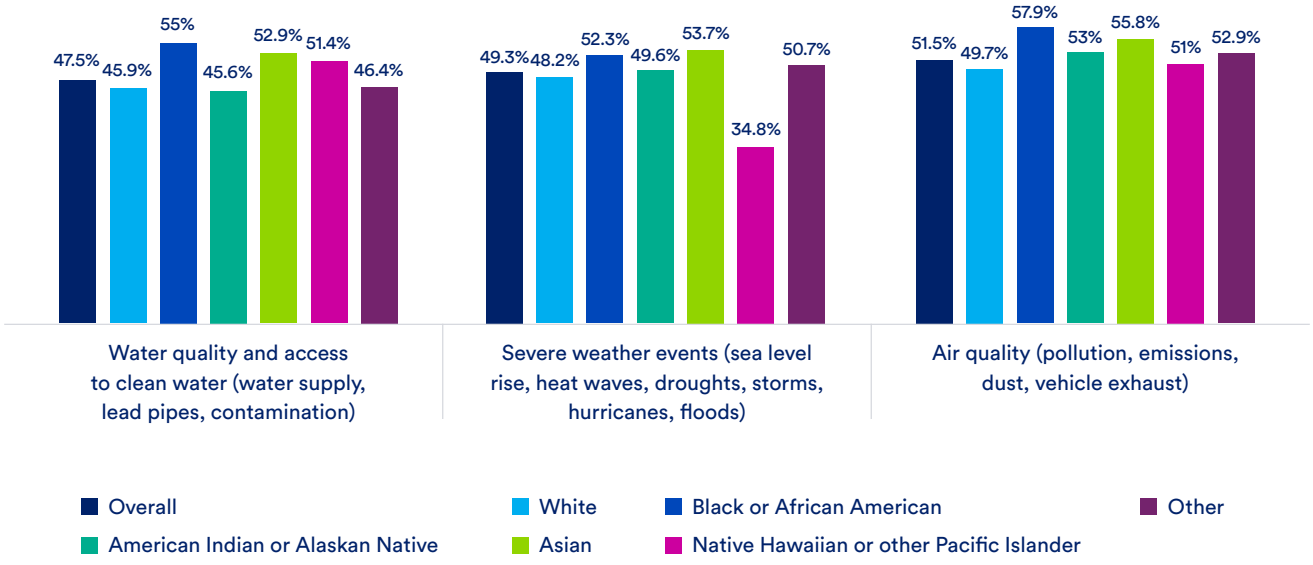


Figure 29: "Major" Or "Moderate" Effect of Health Impacts by Ethnicity

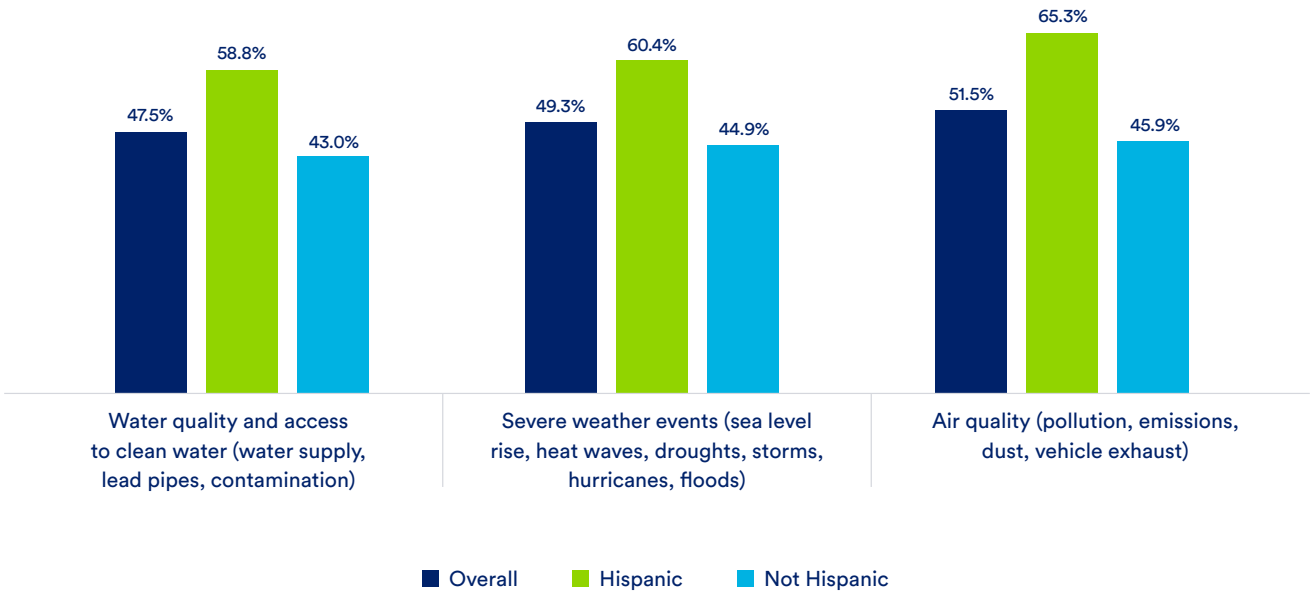


Figure 30: "Major" Or "Moderate" Effect of Health Impacts by Income Level [12]

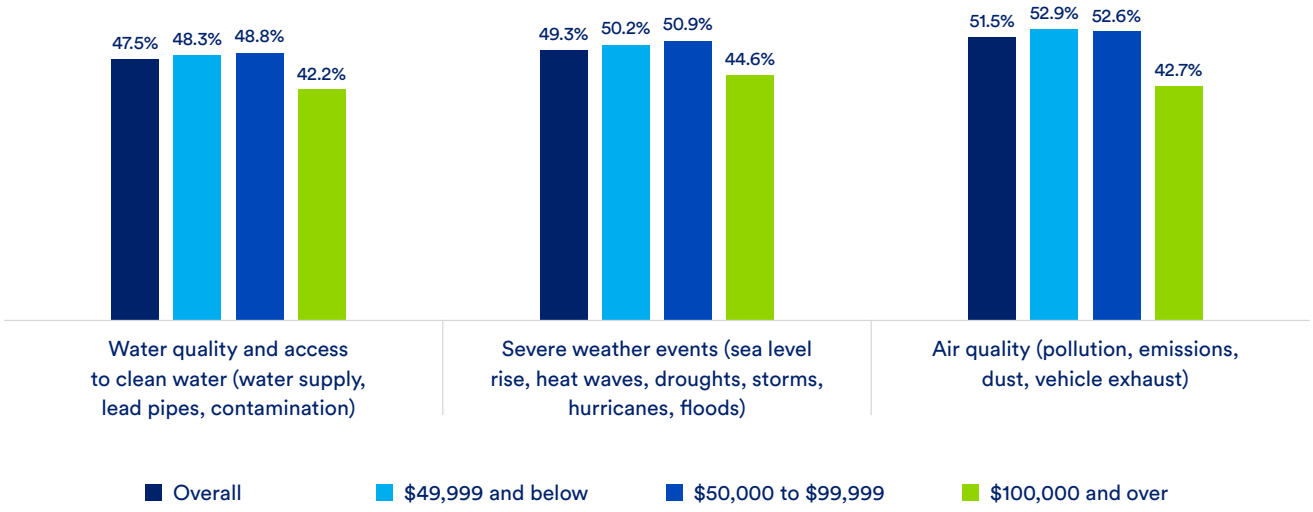
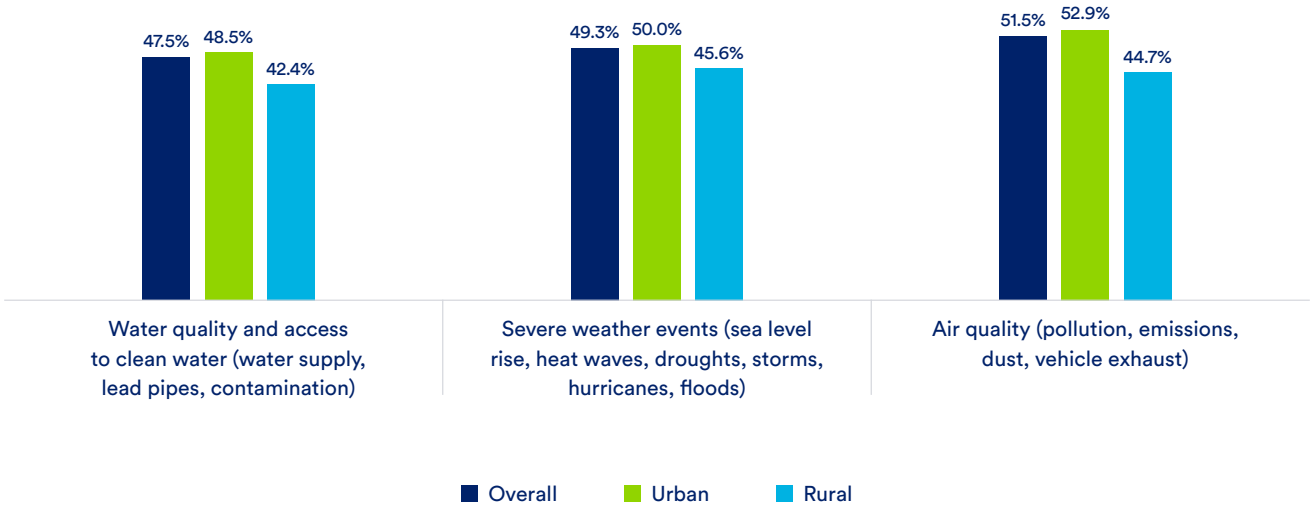


Figure 31: "Major" Or "Moderate" Effect of Health Impacts by Place of Residence [13]



[12] The cross-tabulation for the income question omits the option "Don't know/ Refused".

[13] The cross-tabulation for "Urban" and "Rural" includes only respondents who provided a zip code, where as "Overall" includes all respondents.

Q6. Please indicate your level of agreement with the following statements.

Figure 32: "Strongly" Or "Somewhat" Agree with Concerns by Race

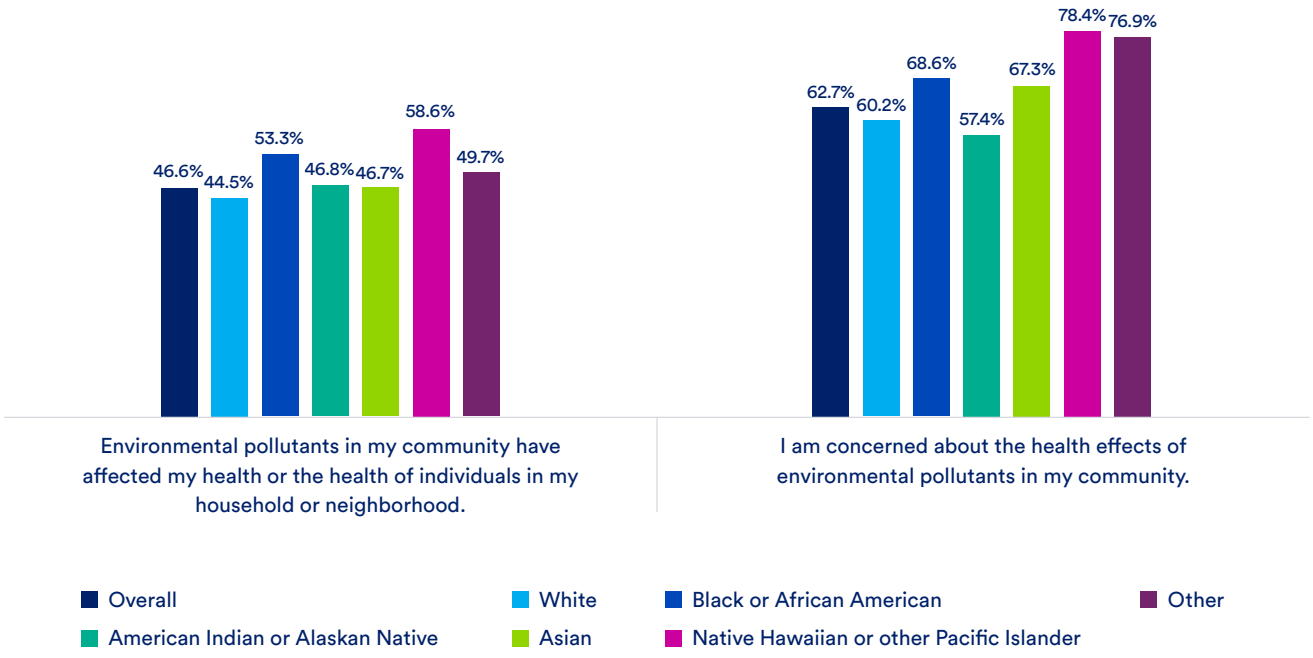


Figure 33: "Strongly" Or "Somewhat" Agree with Concerns by Ethnicity

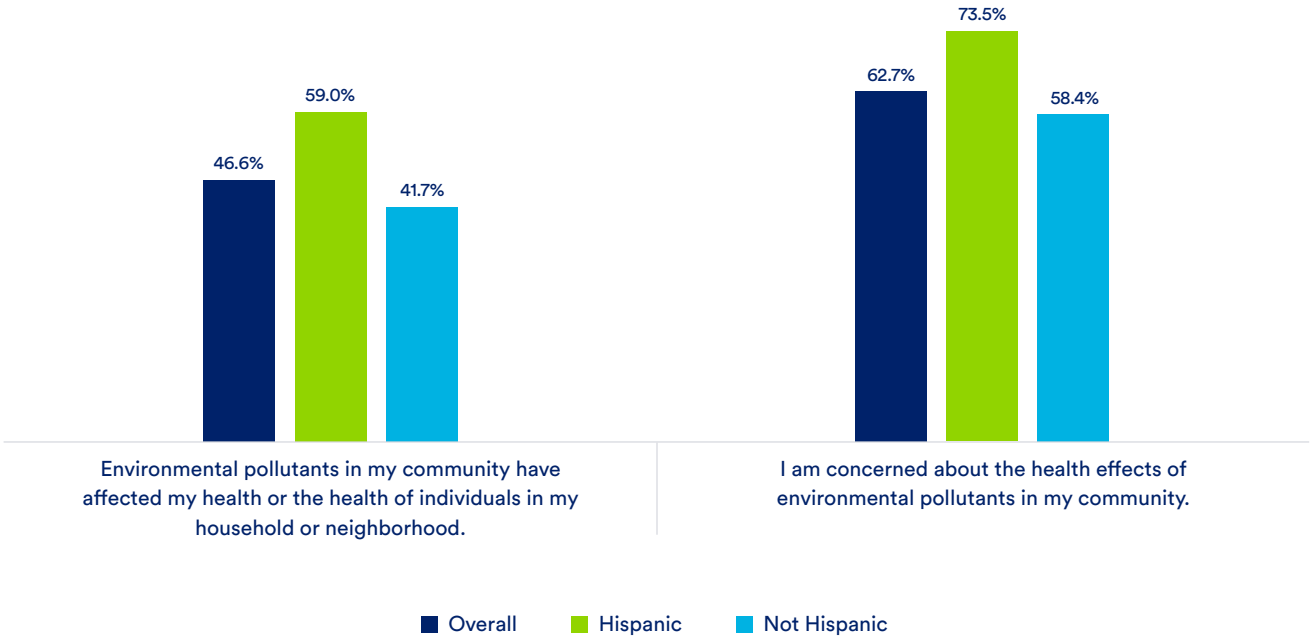


Figure 34: "Strongly" Or "Somewhat" Agree with Concerns by Income Level[14]

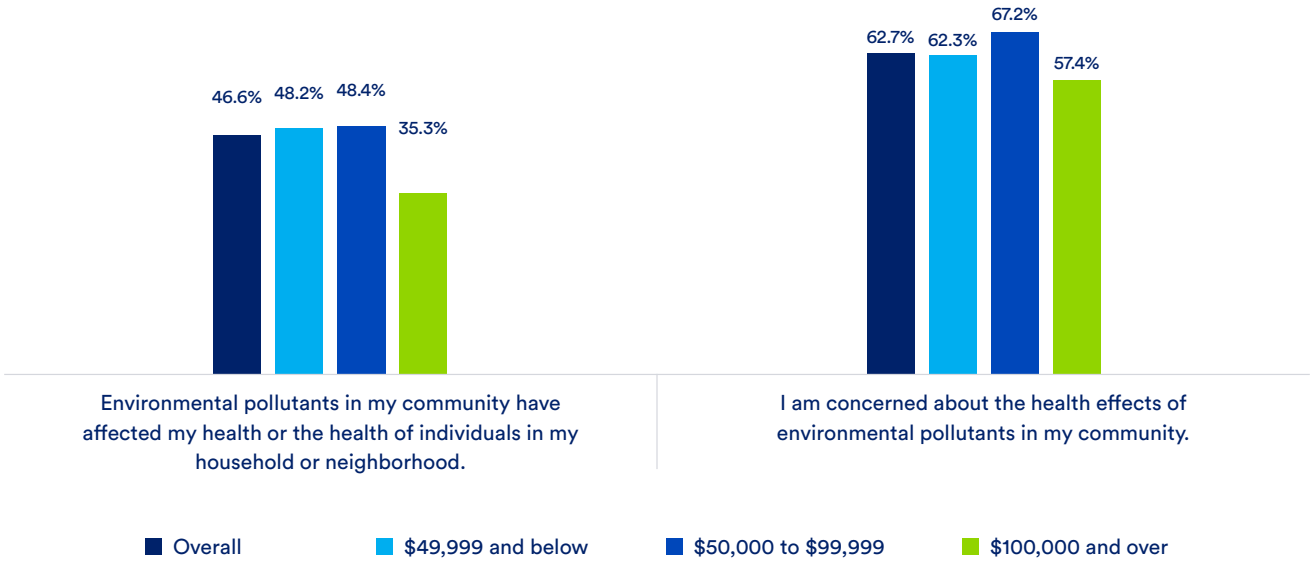
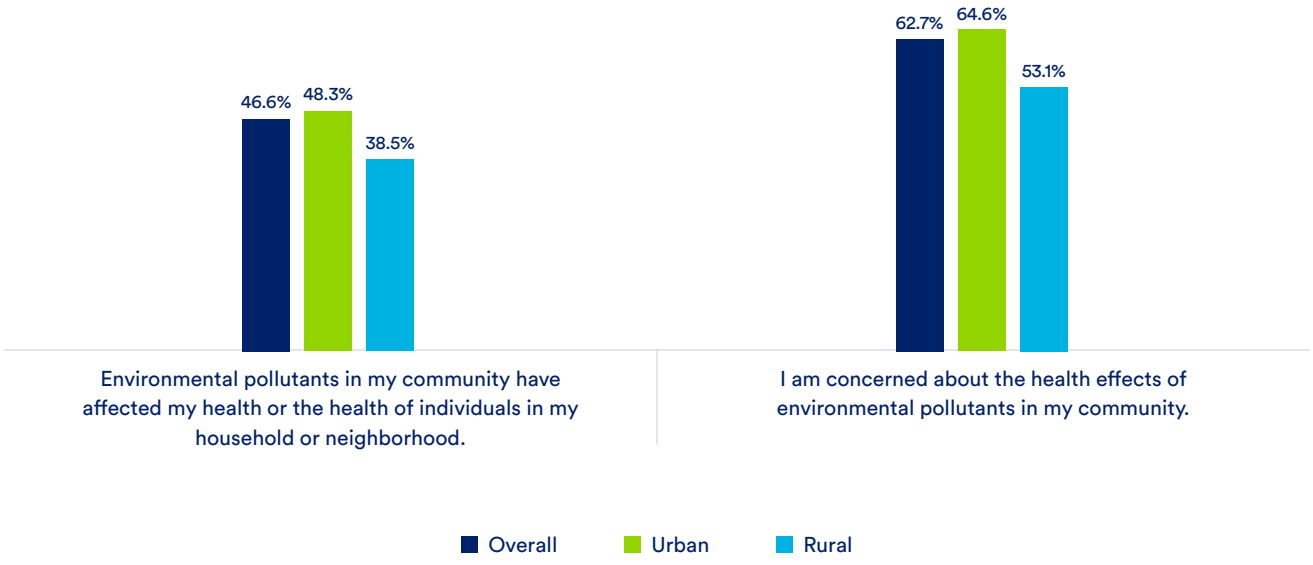


Figure 35: "Strongly" Or "Somewhat" Agree with Concerns by Place of Residence[15]



[14] The cross-tabulation for the income question omits the option "Don't know/ Refused".

[15] The cross-tabulation for "Urban" and "Rural" includes only respondents who provided a zip code, where as "Overall" includes all respondents.

Q9. Have you ever considered and/or looked for employment in the clean energy industry?[16]

Figure 36: Clean Energy Career Consideration by Race

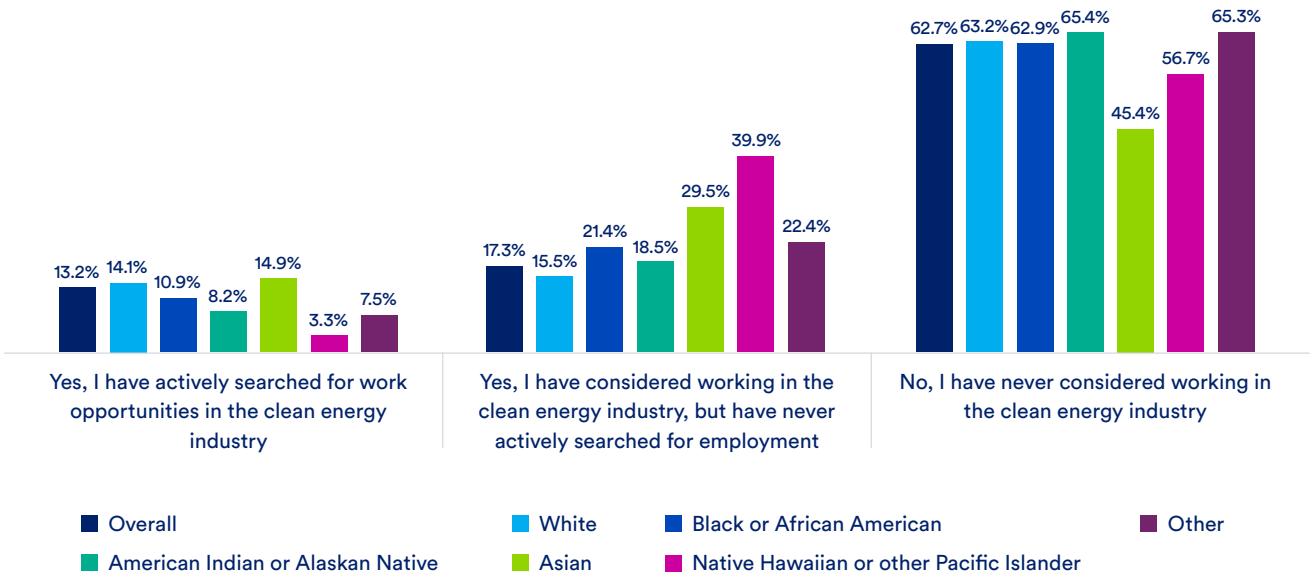
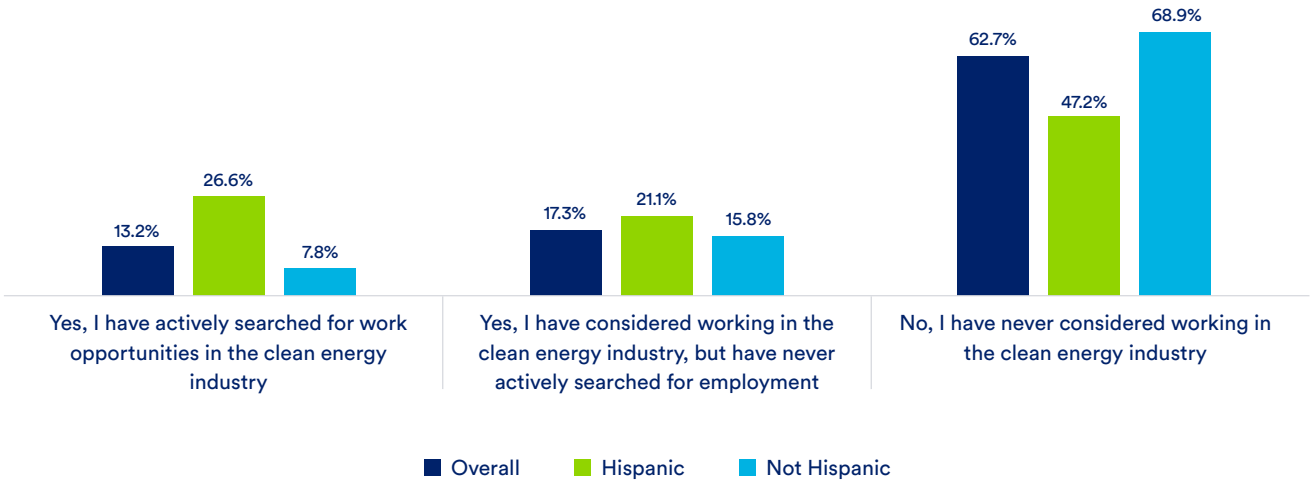


Figure 37: Clean Energy Career Consideration by Ethnicity



[16] The cross-tabulation for the clean energy career consideration question omits the option "Don't know/ Refused"

Figure 38: Clean Energy Career Consideration by Income Level[17]

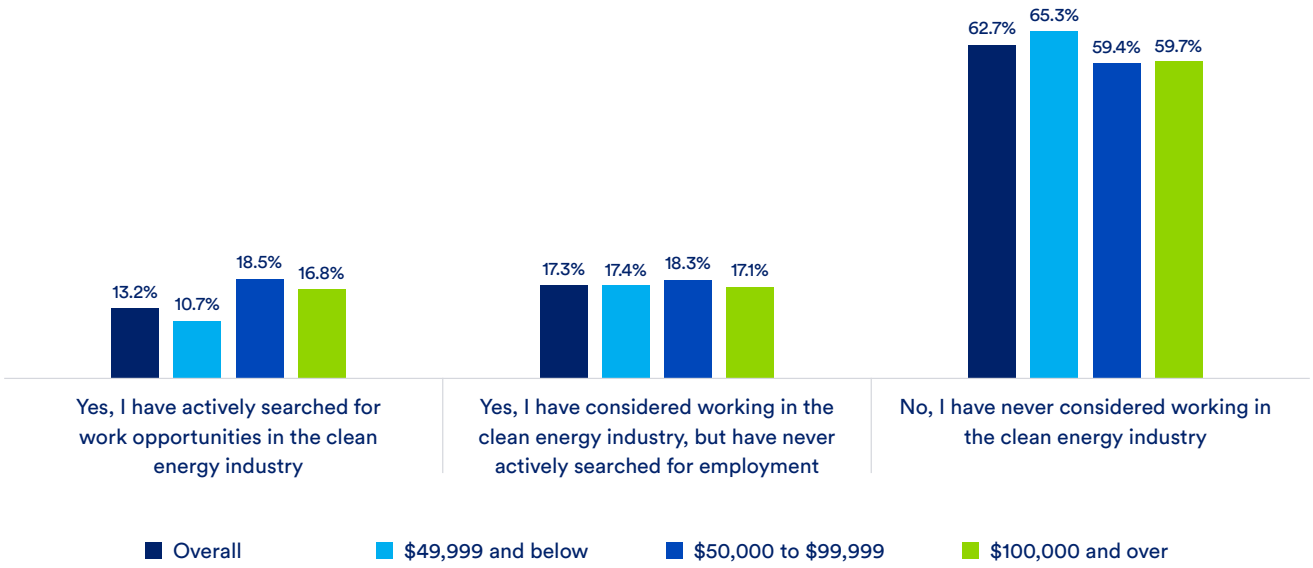
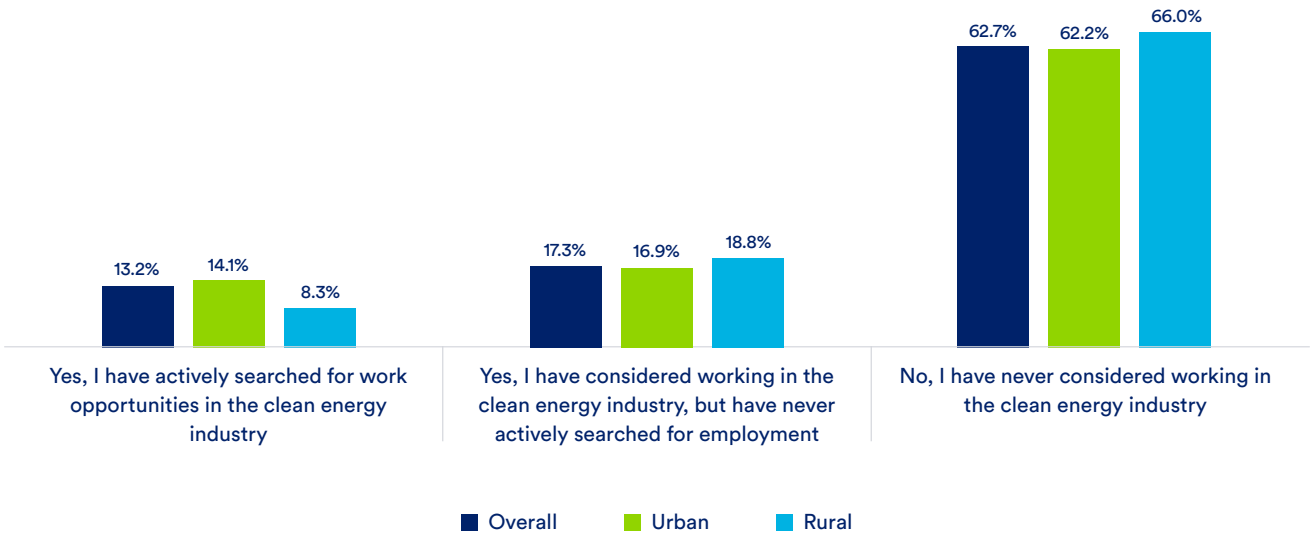


Figure 39: Clean Energy Career Consideration by Place of Residence[18]



[17] The cross-tabulation for the income question omits the option "Don't know/ Refused".

[18] The cross-tabulation for "Urban" and "Rural" includes only respondents who provided a zip code, where as "Overall" includes all respondents.

Q10. Please indicate your level of agreement with the following statements.

Figure 40: "Strongly" Or "Somewhat" Agree with Barriers by Race

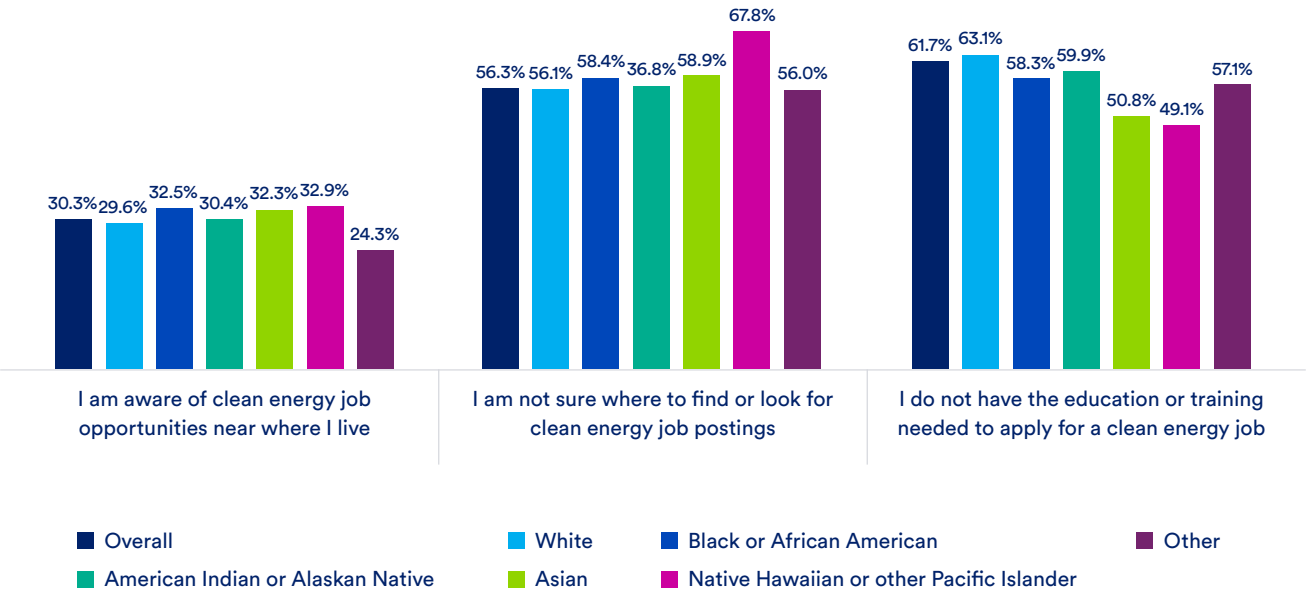


Figure 41: "Strongly" Or "Somewhat" Agree with Barriers by Ethnicity

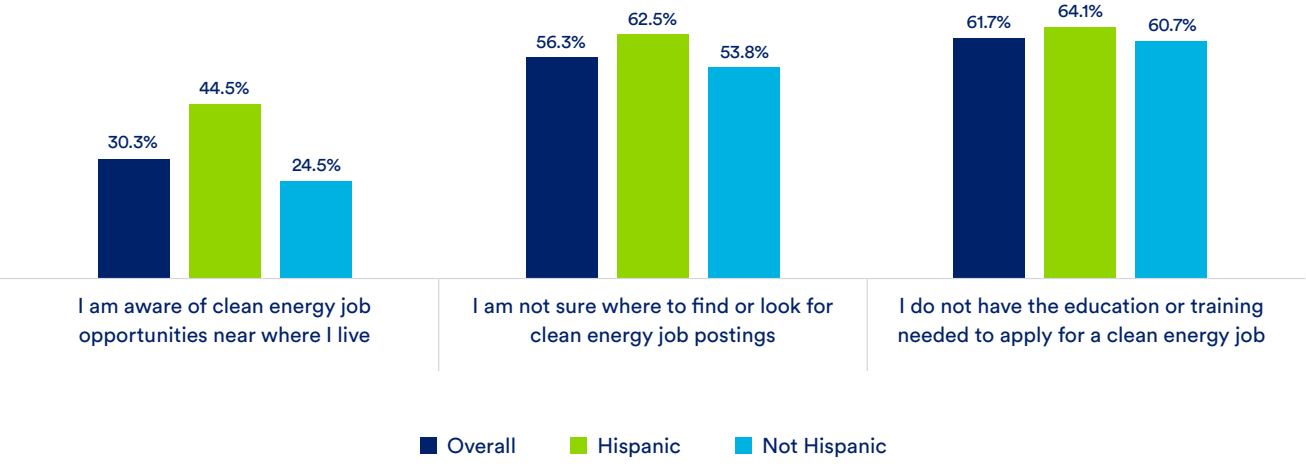


Figure 42: "Strongly" Or "Somewhat" Agree with Barriers by Income Level[19]

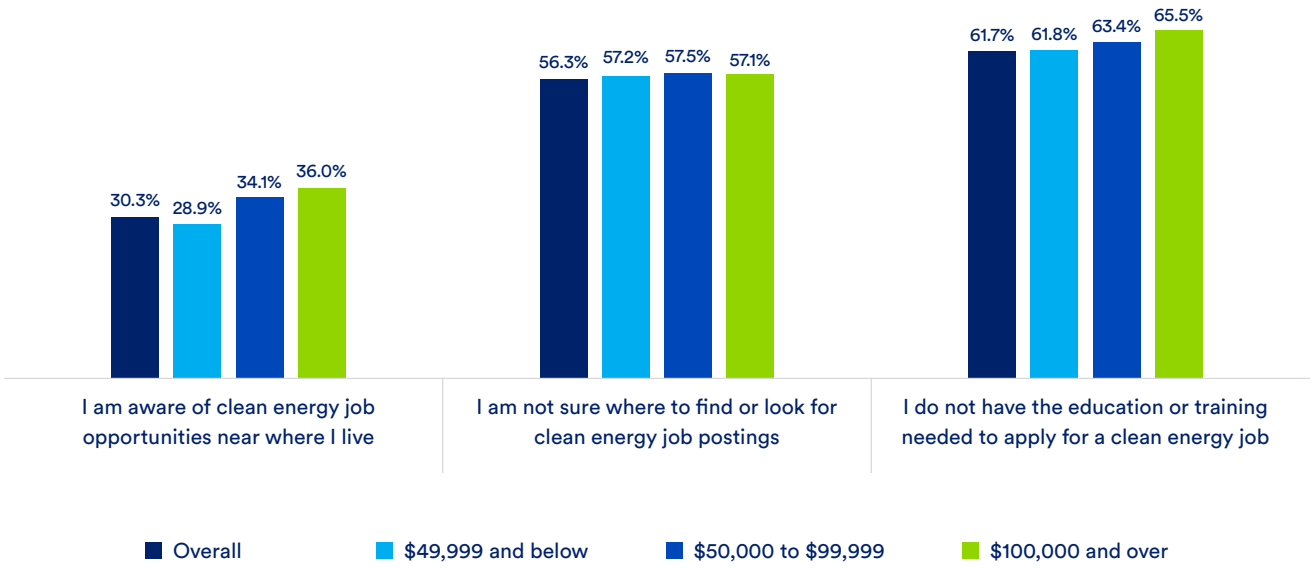
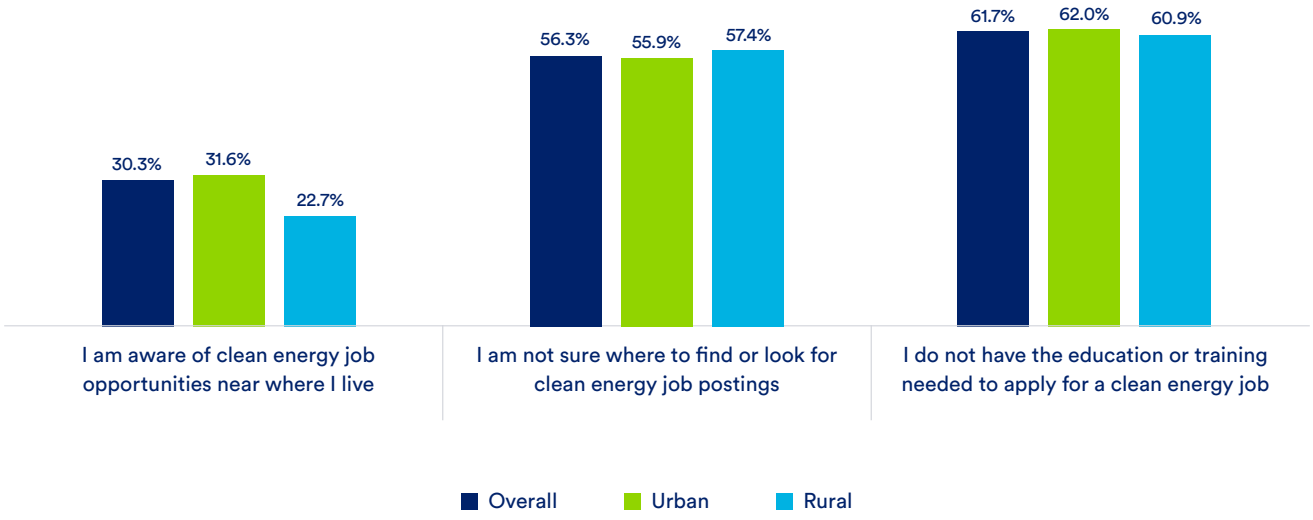


Figure 43: "Strongly" Or "Somewhat" Agree with Barriers by Place of Residence[20]



[19] The cross-tabulation for the income question omits the option "Don't know/ Refused".

[20] The cross-tabulation for "Urban" and "Rural" includes only respondents who provided a zip code, where as "Overall" includes all respondents.

Q11. If you were looking for a new employment opportunity and saw a position in the renewable energy industry, how likely are you to apply for it?

Figure 44: "Very" Or "Somewhat" Likely to Apply by Race

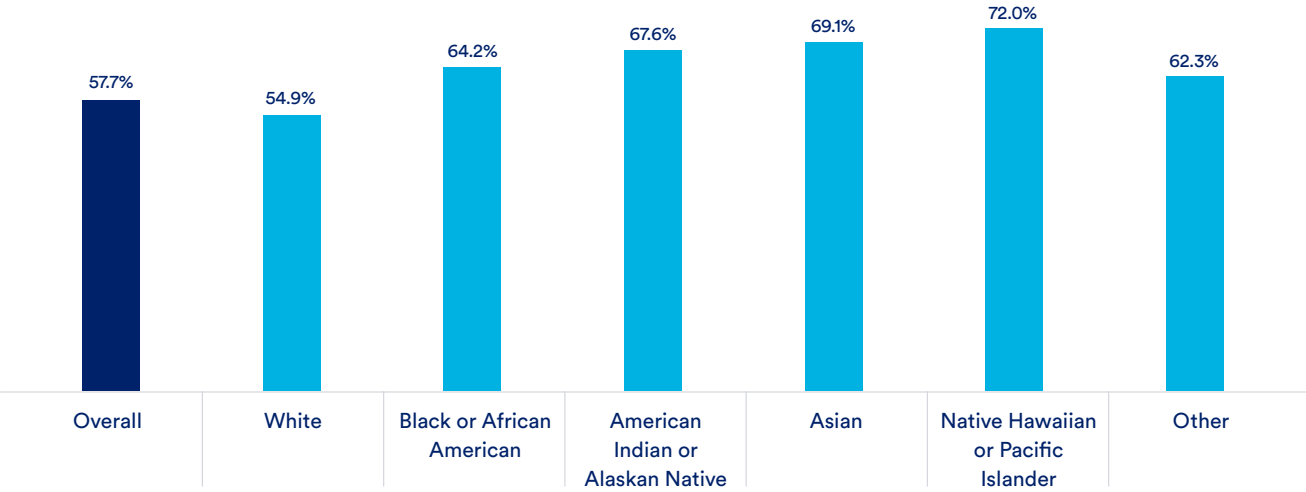


Figure 45: "Very" Or "Somewhat" Likely to Apply by Ethnicity

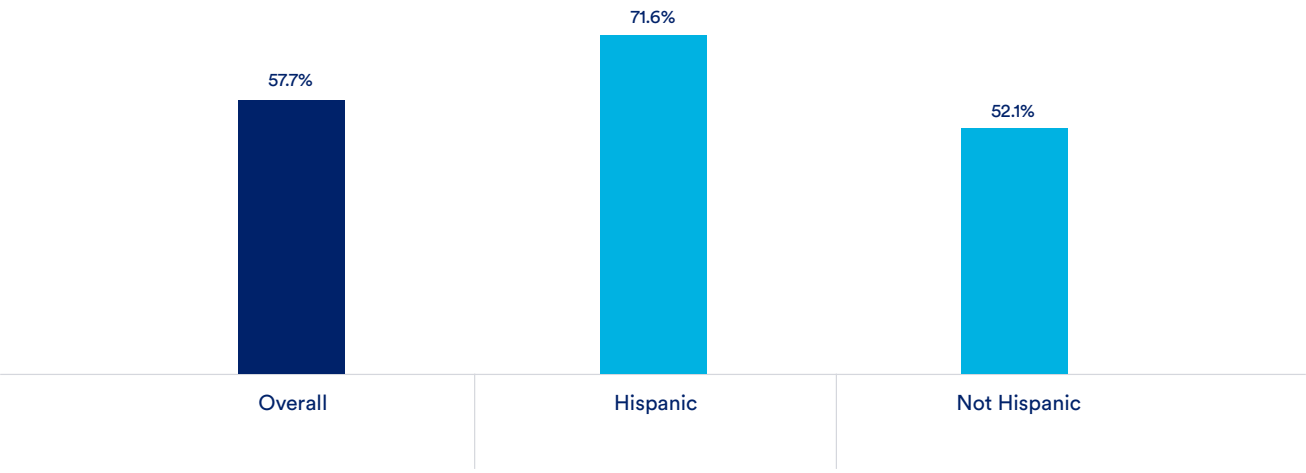
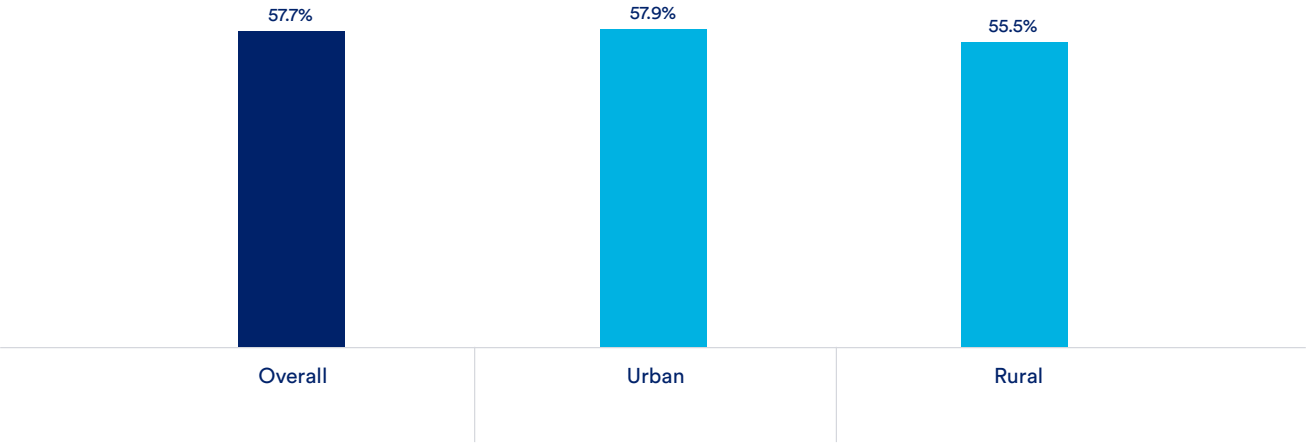


Figure 46: “Very” Or “Somewhat” Likely to Apply by Income Level[21]

Figure 47: “Very” Or “Somewhat” Likely to Apply by Place of Residence[22]



[21] The cross-tabulation for the income question omits the option “Don’t know/ Refused”.

[22] The cross-tabulation for “Urban” and “Rural” includes only respondents who provided a zip code, where as “Overall” includes all respondents.

Q12. If you were looking for a new employment opportunity and saw a position in the non-renewable energy industry, how likely are you to apply for it?

Figure 48: "Very" Or "Somewhat" Likely to Apply by Race

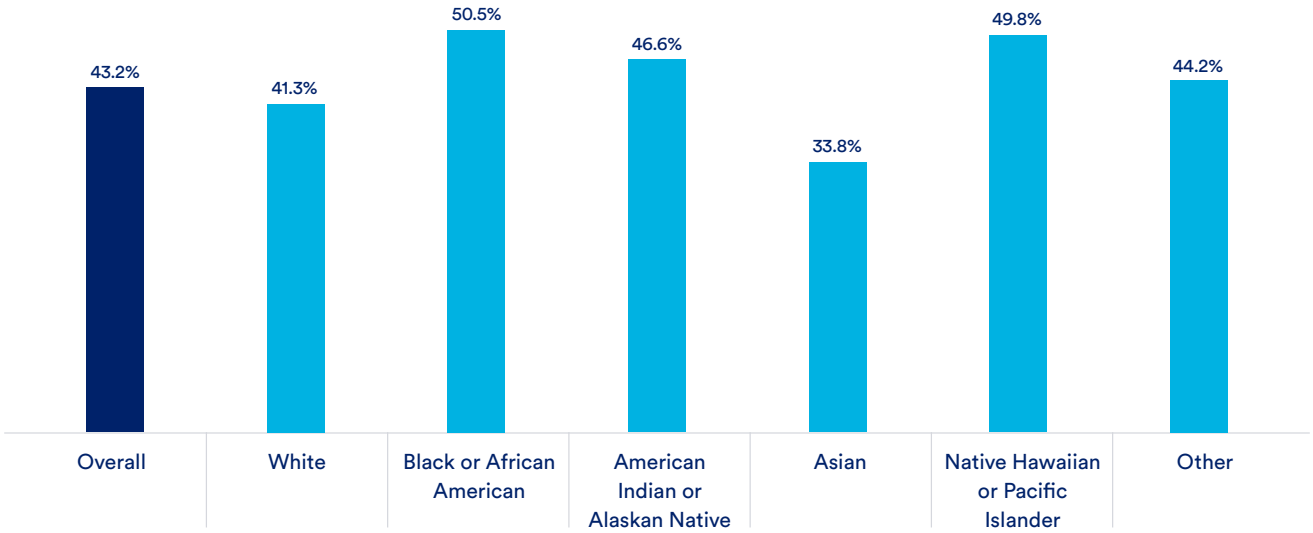


Figure 49: "Very" Or "Somewhat" Likely to Apply by Ethnicity

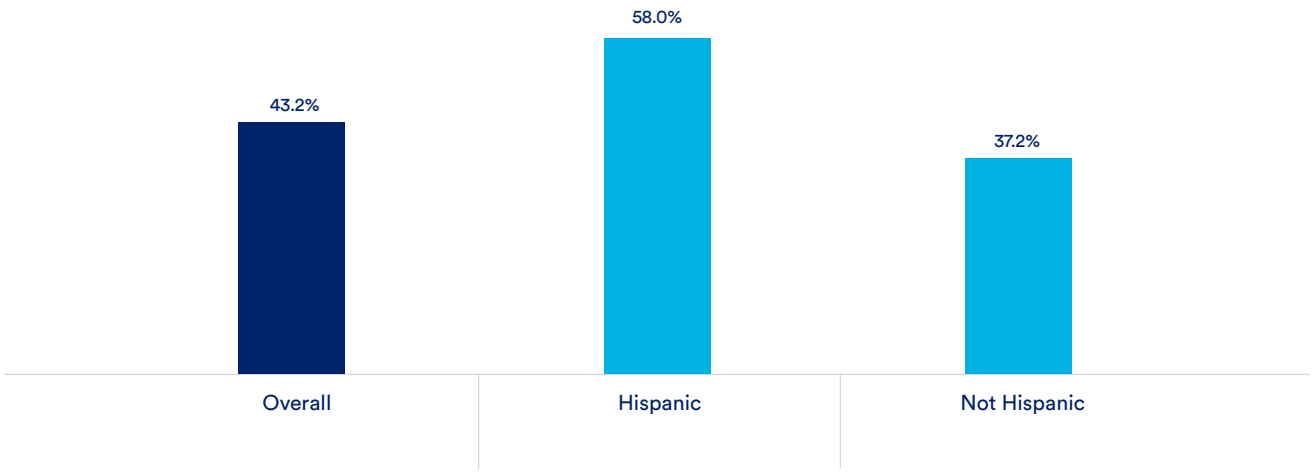
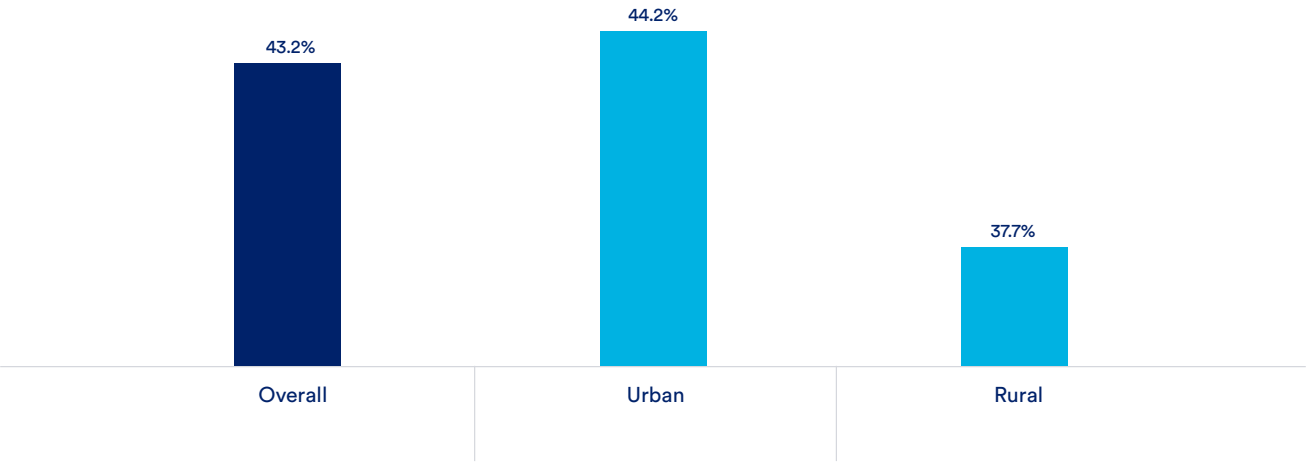


Figure 50: “Very” Or “Somewhat” Likely to Apply by Income Level[23]

Figure 51: “Very” Or “Somewhat” Likely to Apply by Place of Residence[24]



[23] The cross-tabulation for the income question omits the option “Don’t know/ Refused”.

[24] The cross-tabulation for “Urban” and “Rural” includes only respondents who provided a zip code, where as “Overall” includes all respondents..

Q13. Please indicate your level of agreement with the following statements.

Figure 52: "Strongly" Or "Somewhat" Agree with Industry Perceptions by Race

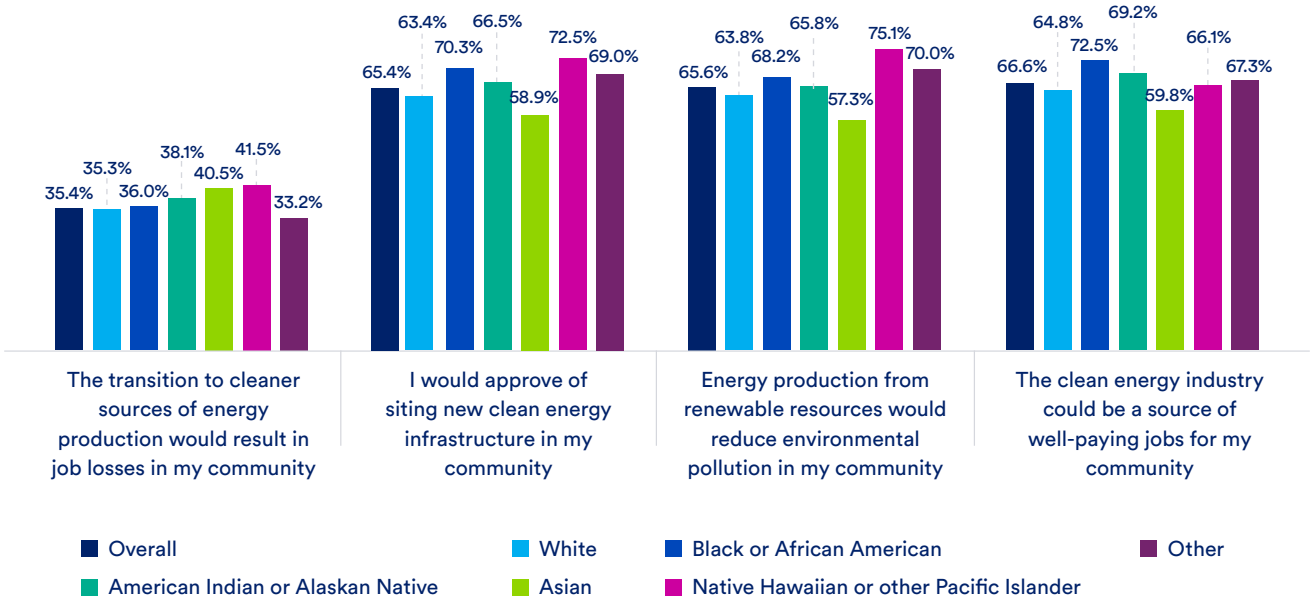


Figure 53: "Strongly" Or "Somewhat" Agree with Industry Perceptions by Ethnicity

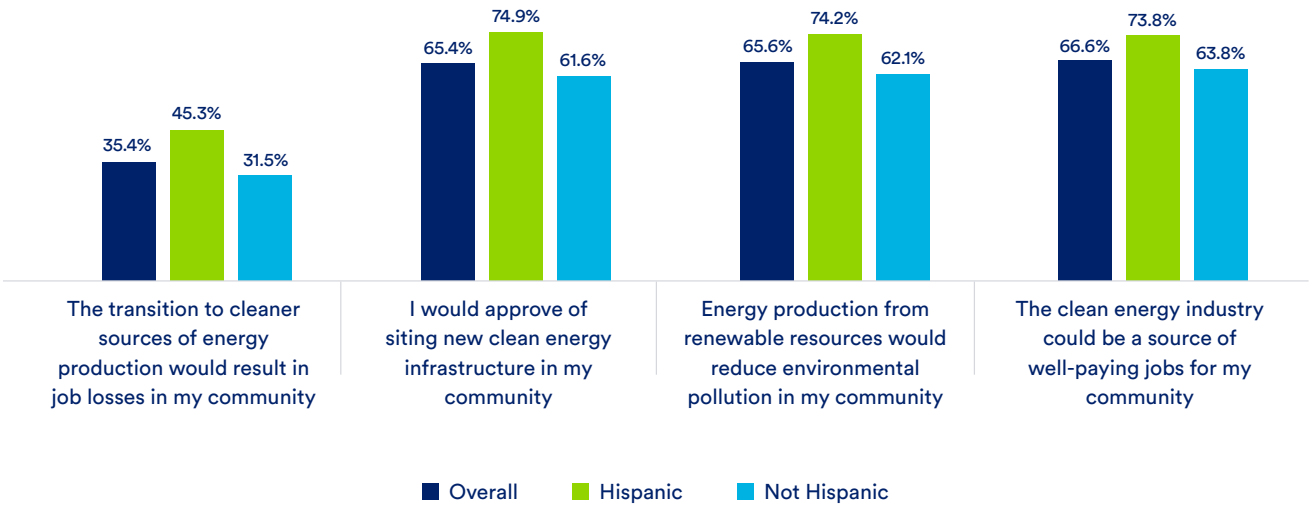


Figure 54: "Strongly" Or "Somewhat" Agree with Industry Perceptions by Income Level [25]

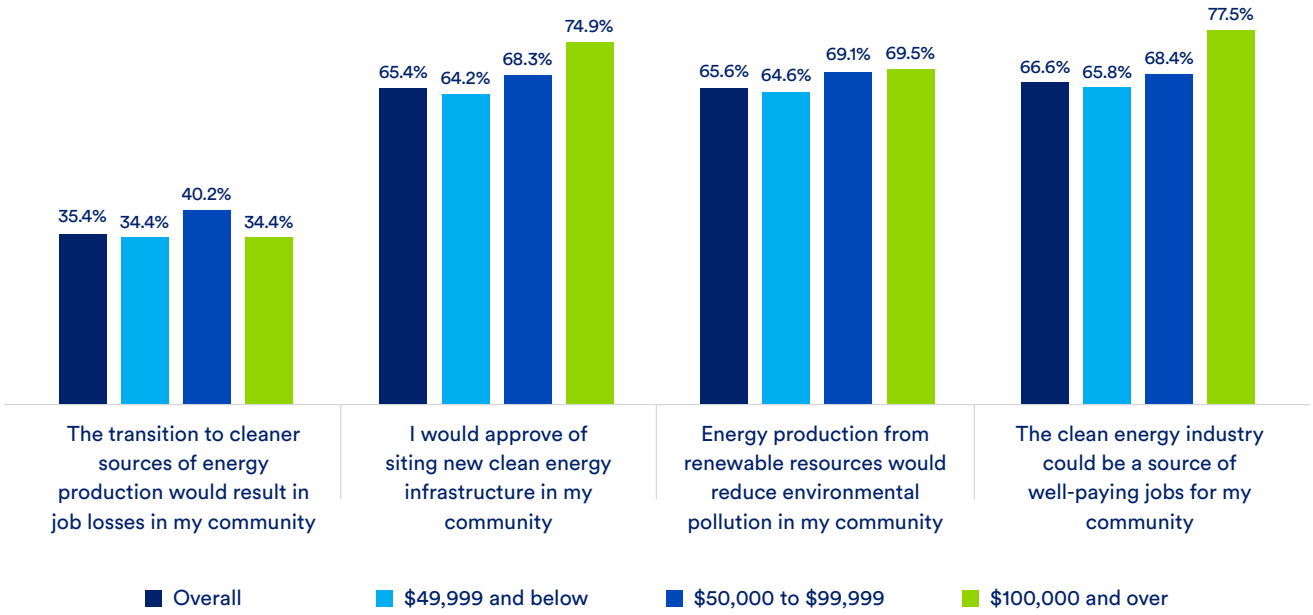
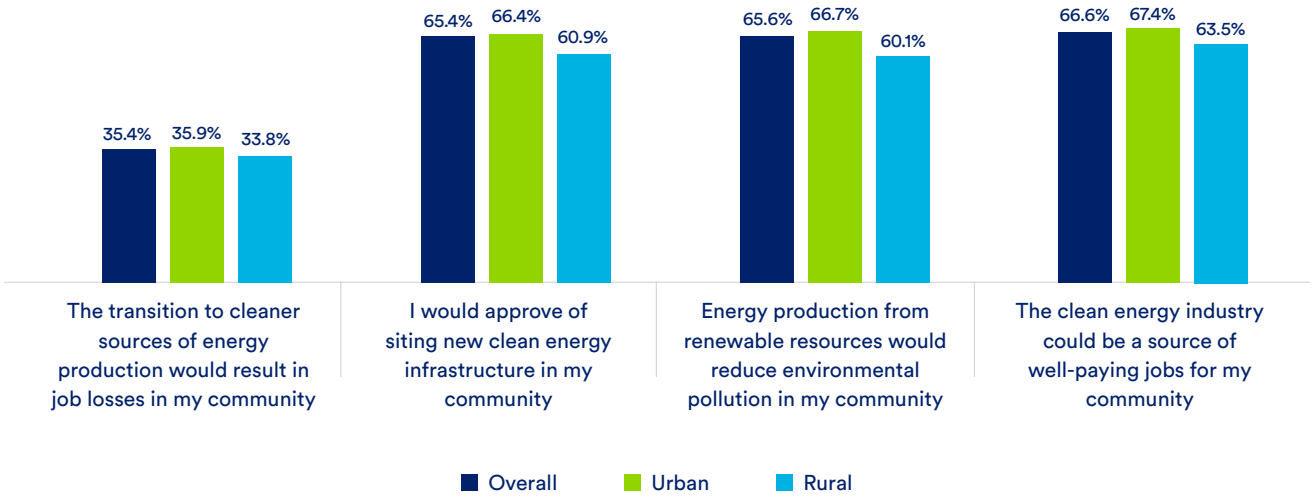


Figure 55: "Strongly" Or "Somewhat" Agree with Industry Perceptions by Place of Residence[26]



[25] The cross-tabulation for the income question omits the option "Don't know/ Refused".

[26] The cross-tabulation for "Urban" and "Rural" includes only respondents who provided a zip code, where as "Overall" includes all respondents.

Q14. How often do you participate in each of the following activities?

Figure 56: "Regular (At Least Once a Week)" Participation by Race

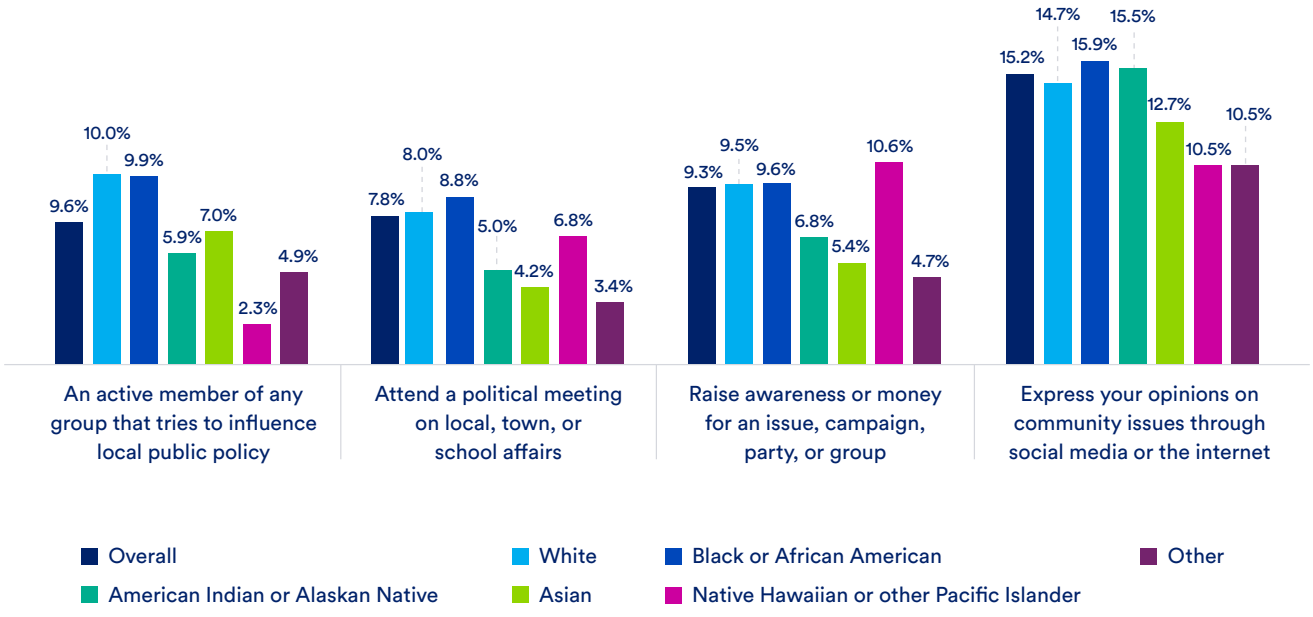


Figure 57: "Regular (At Least Once a Week)" Participation by Ethnicity

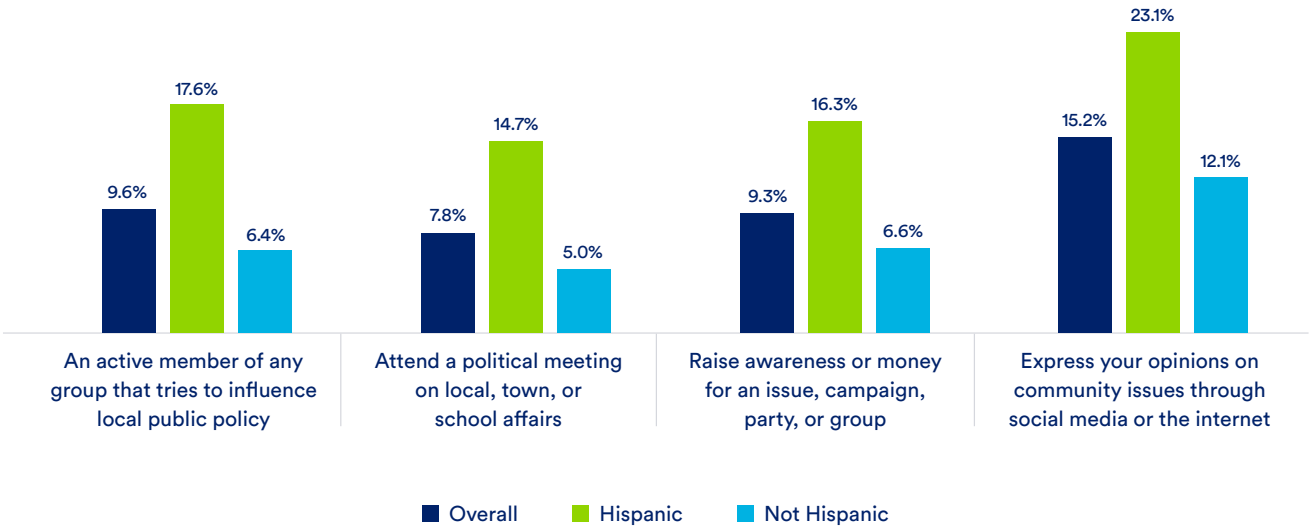


Figure 58: "Regular (At Least Once a Week)" Participation by Income Level[27]

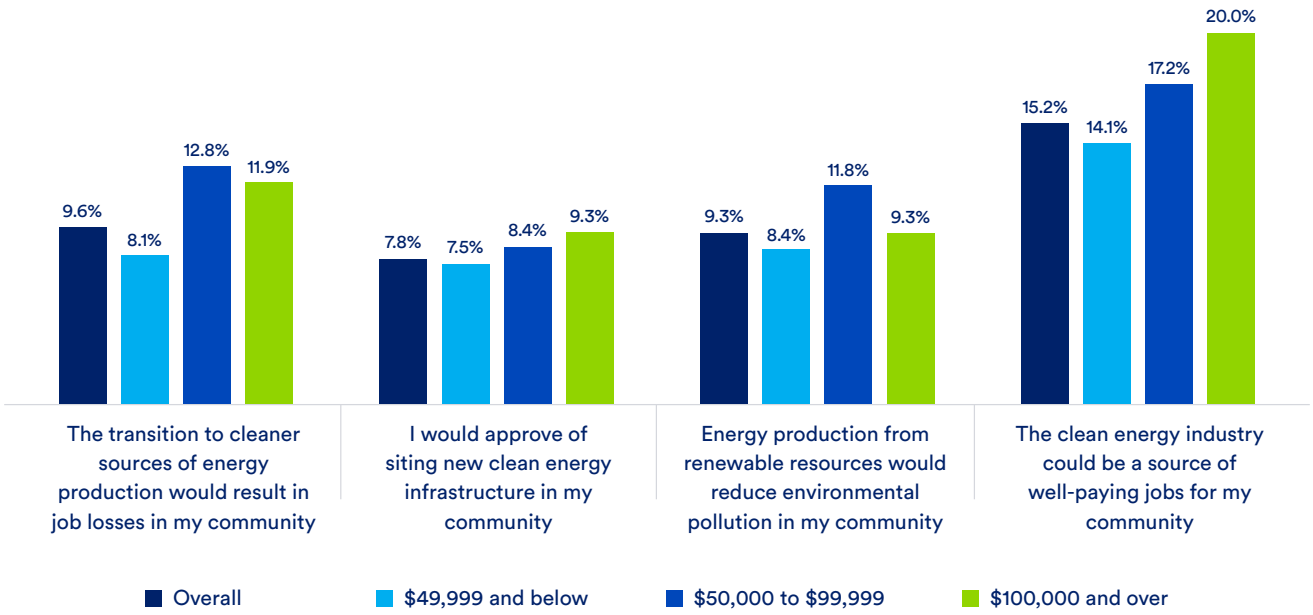
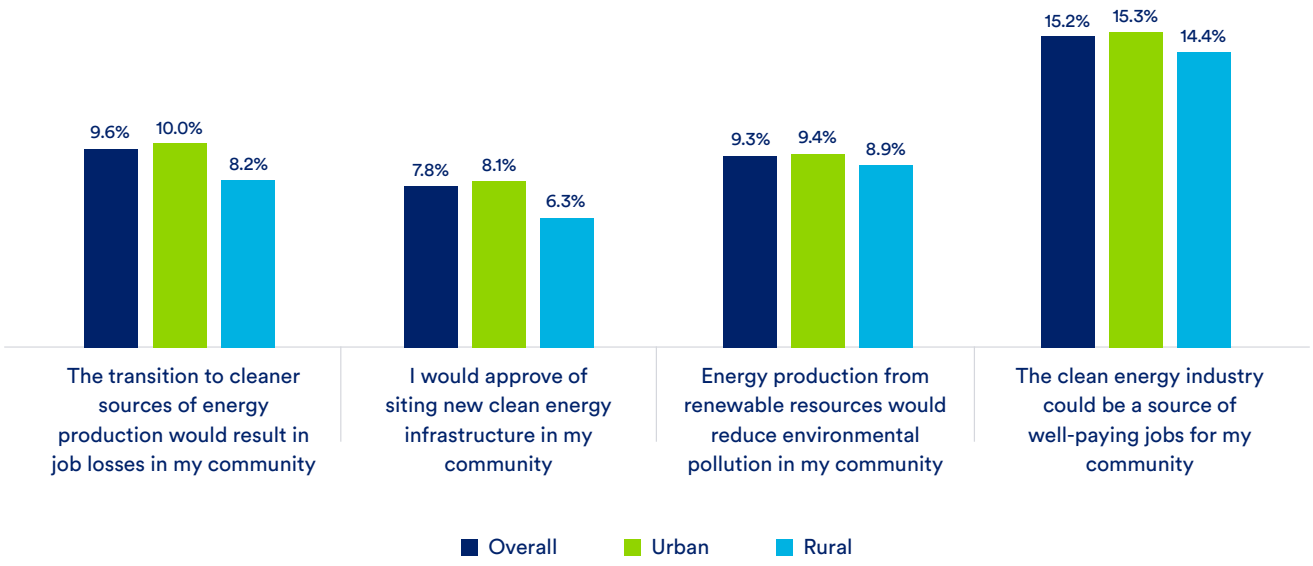


Figure 59: "Regular (At Least Once a Week)" Participation by Place of Residence[28]



[27] The cross-tabulation for the income question omits the option "Don't know/ Refused".

[28] The cross-tabulation for "Urban" and "Rural" includes only respondents who provided a zip code, where as "Overall" includes all respondents.

Q16. Please indicate your level of agreement with the following statements.

Figure 60: “Strongly” Or “Somewhat” Agree by Race

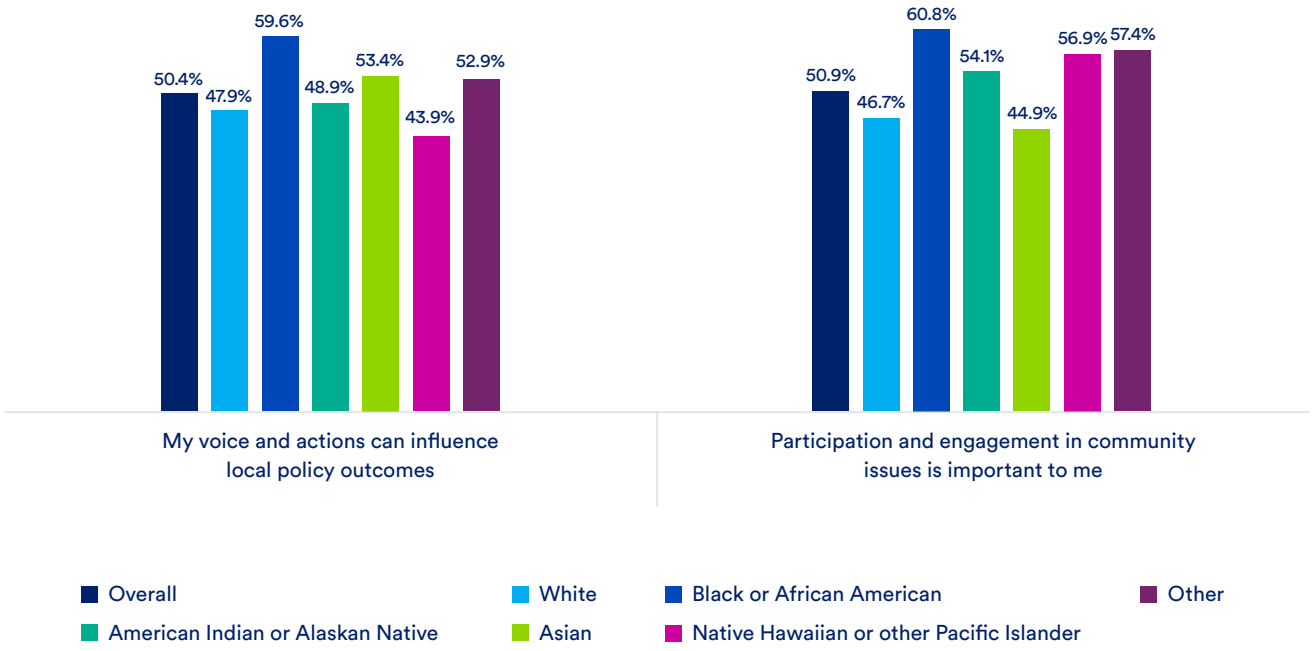


Figure 61: “Strongly” Or “Somewhat” Agree by Ethnicity

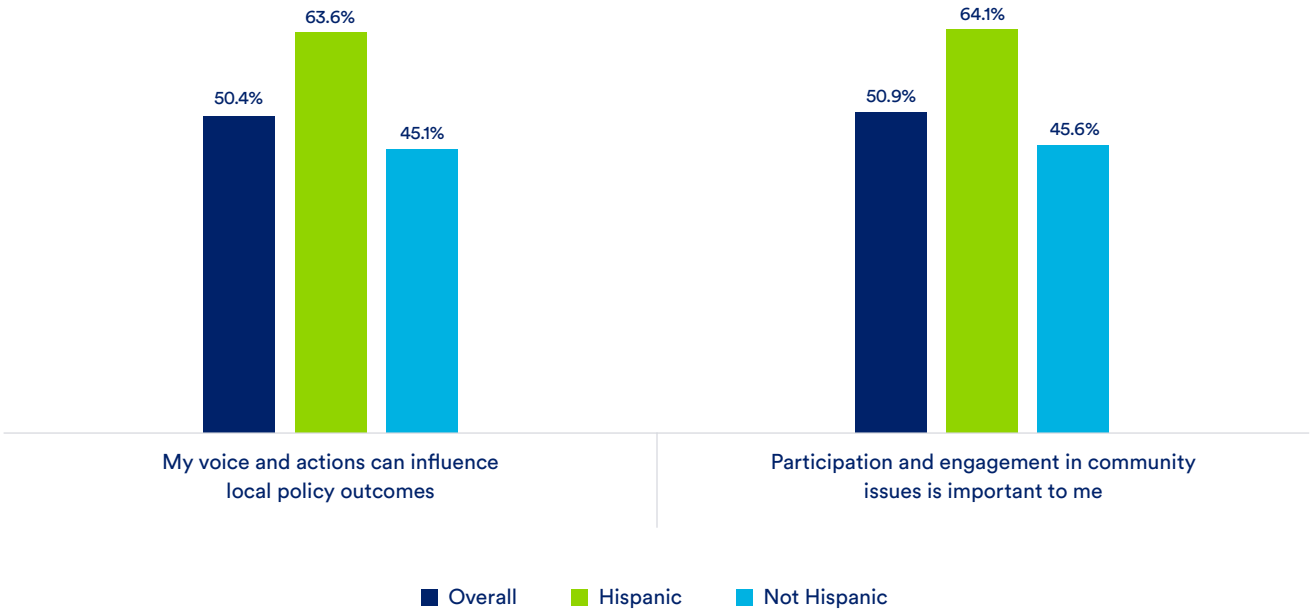


Figure 62: "Strongly" Or "Somewhat" Agree by Income Level[29]

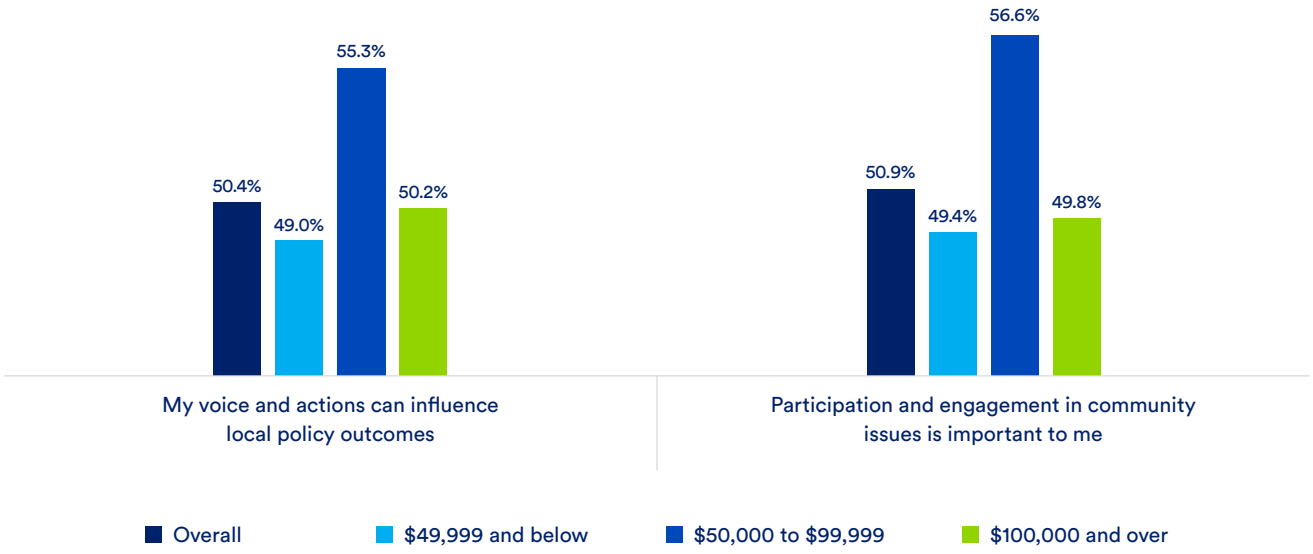
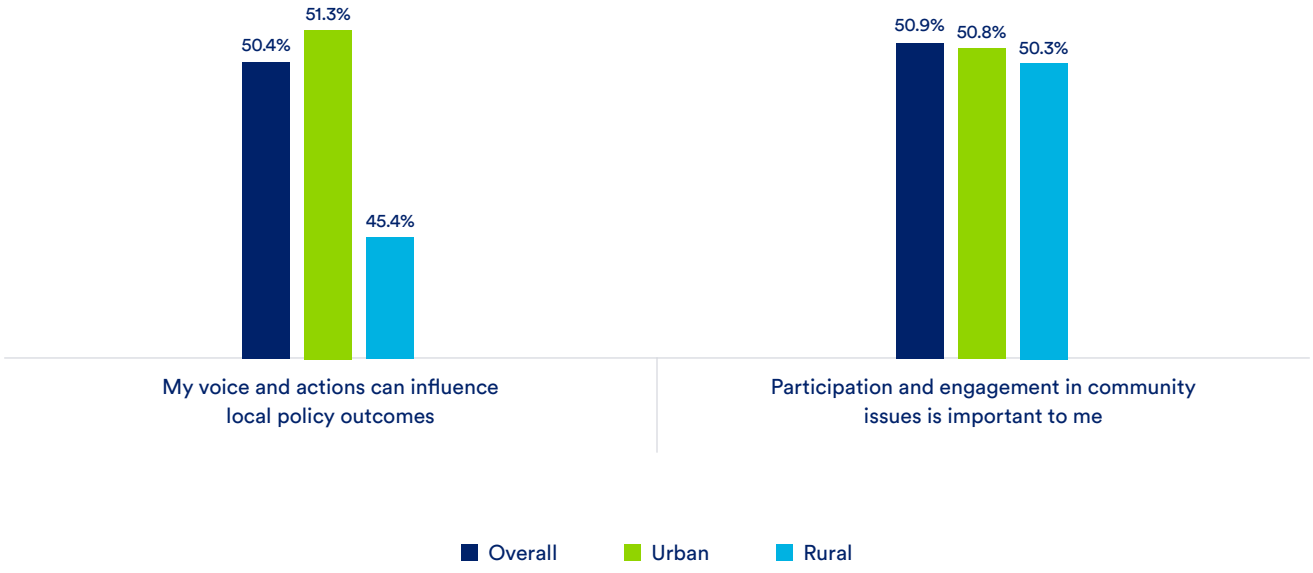


Figure 63: "Strongly" Or "Somewhat" Agree by Place of Residence[30]



[29] The cross-tabulation for the income question omits the option "Don't know/ Refused".

[30] The cross-tabulation for "Urban" and "Rural" includes only respondents who provided a zip code, where as "Overall" includes all respondents.

Q17. Please indicate your level of trust if you were to receive information regarding environmental issues in your community from each of the following.

Figure 64: "A Lot" Or "Some" Trust by Race

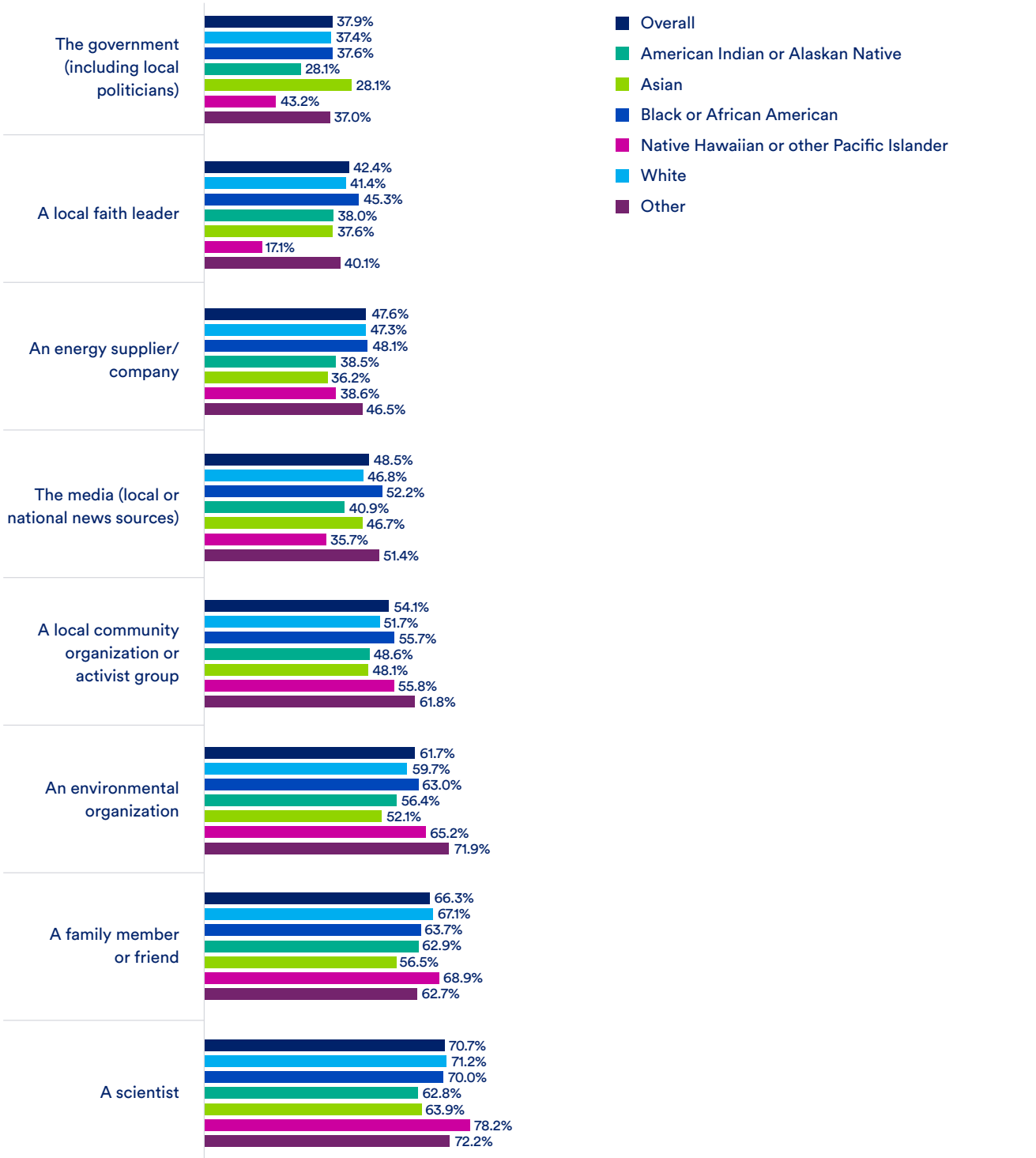


Figure 65: “A Lot” Or “Some” Trust by Ethnicity

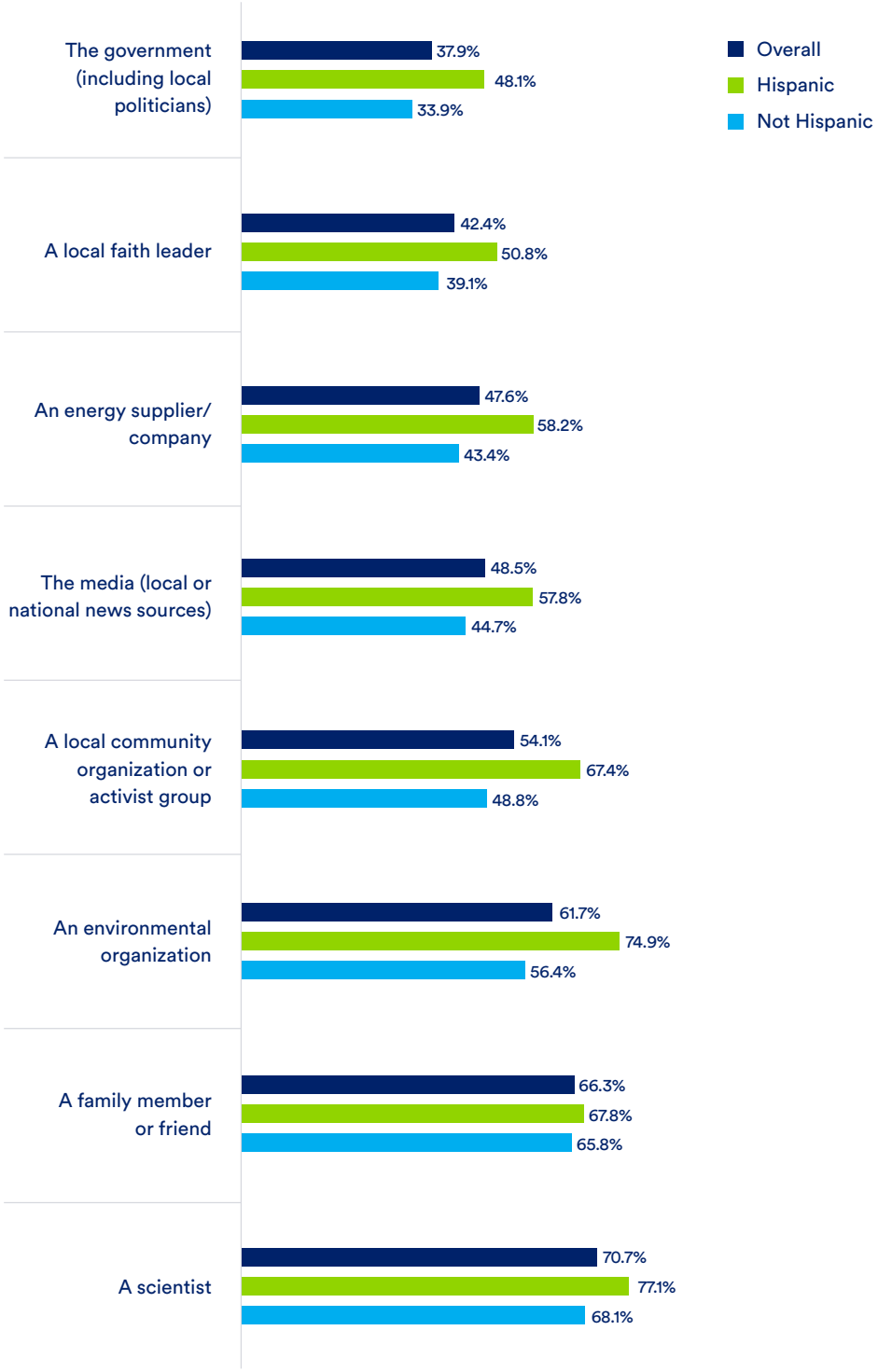
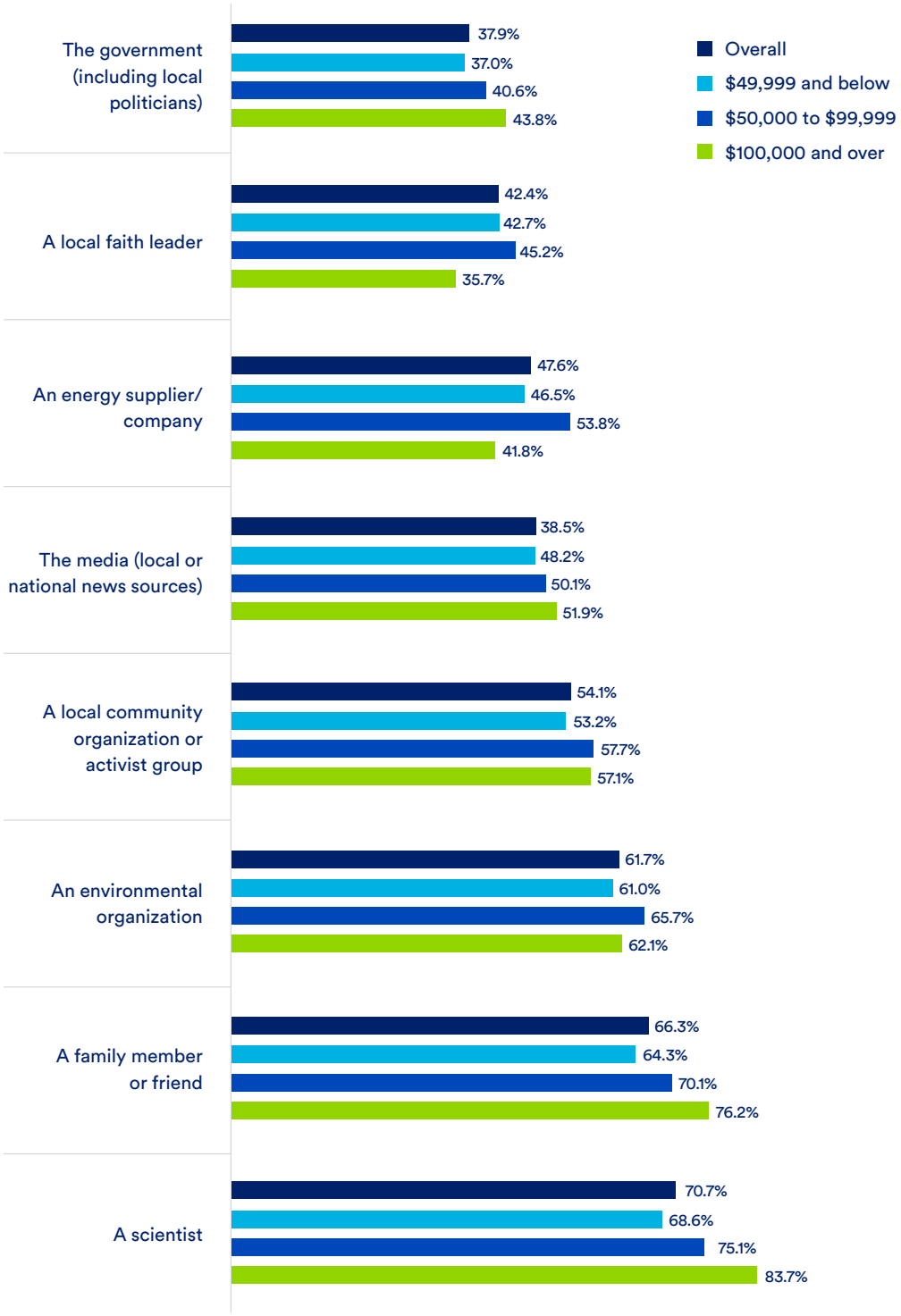
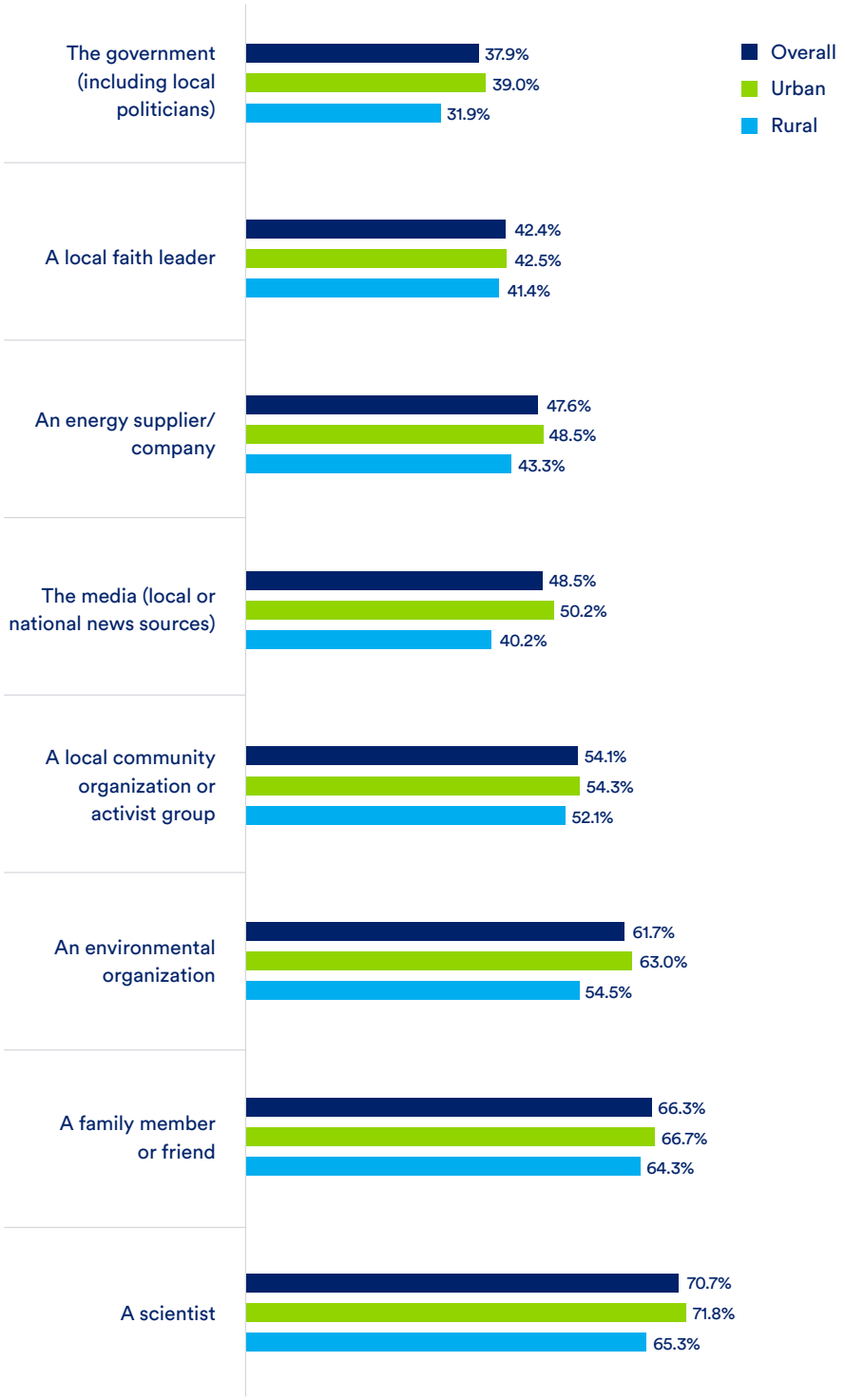


Figure 66: "A Lot" Or "Some" Trust by Income Level[31]



[31] The cross-tabulation for the income question omits the option "Don't know/ Refused".

Figure 67: "A Lot" Or "Some" Trust by Place of Residence[32]



[32] The cross-tabulation for "Urban" and "Rural" includes only respondents who provided a zip code, where as "Overall" includes all respondents.

Accessibility Barriers

Q1. Please indicate your level of agreement with the following statements

Figure 68: “Strongly” Or “Somewhat” Agree by Race

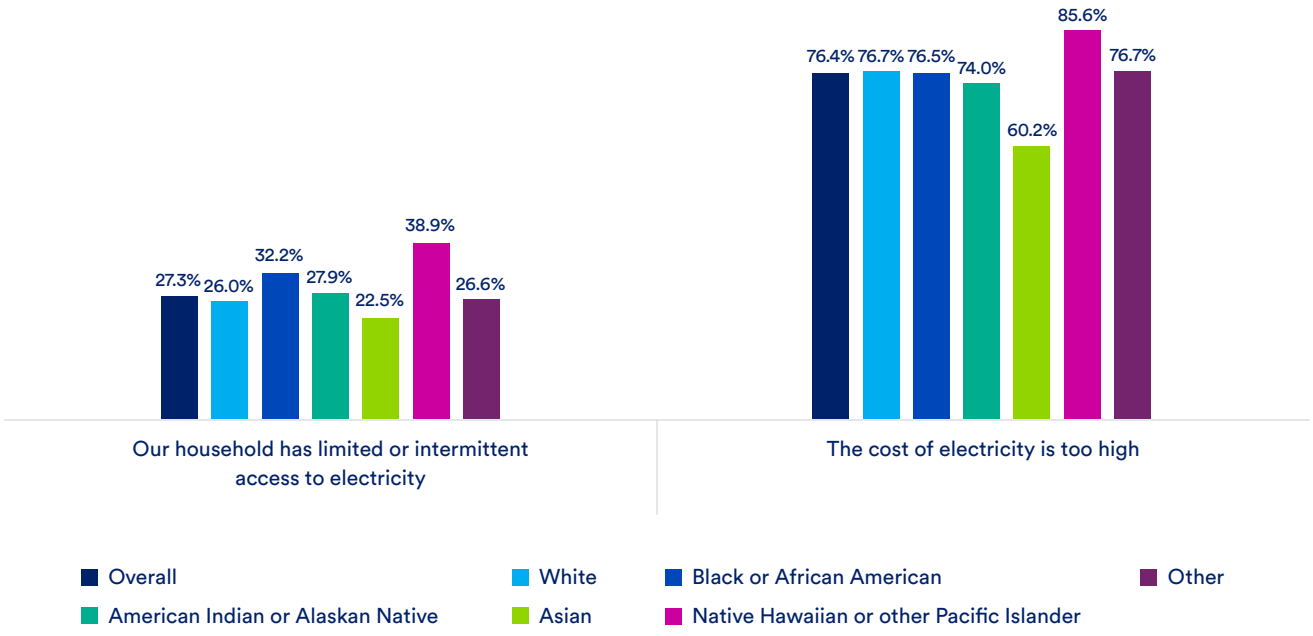


Figure 61: “Strongly” Or “Somewhat” Agree by Ethnicity

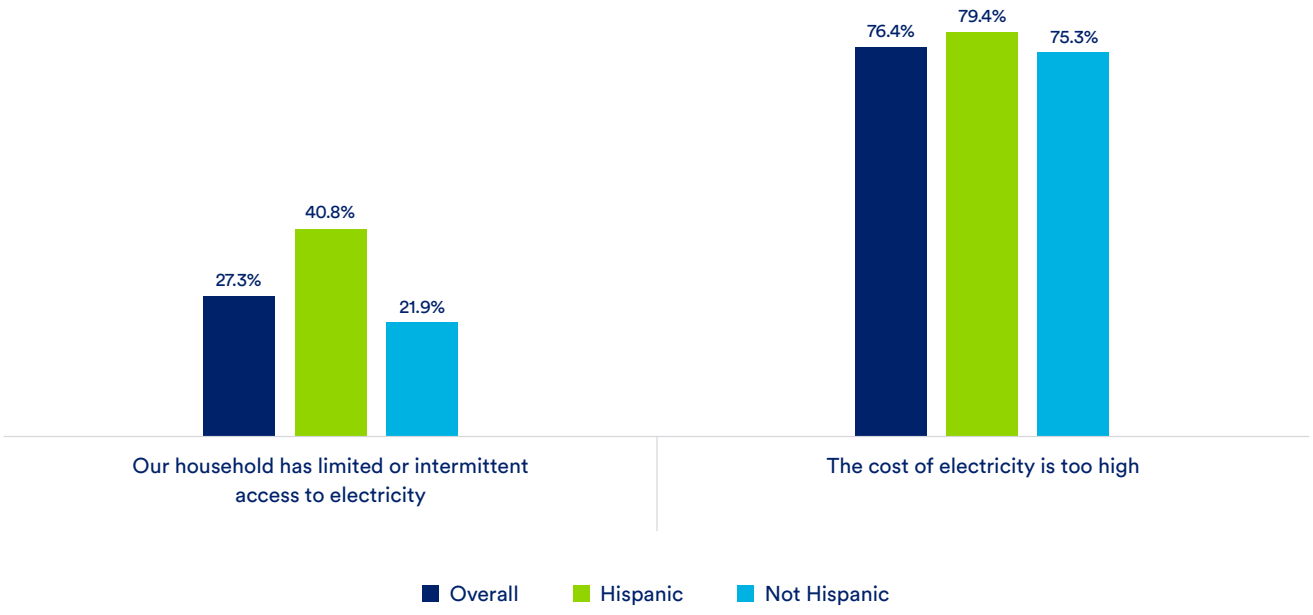


Figure 70: "Strongly" Or "Somewhat" Agree by Income Level[33]

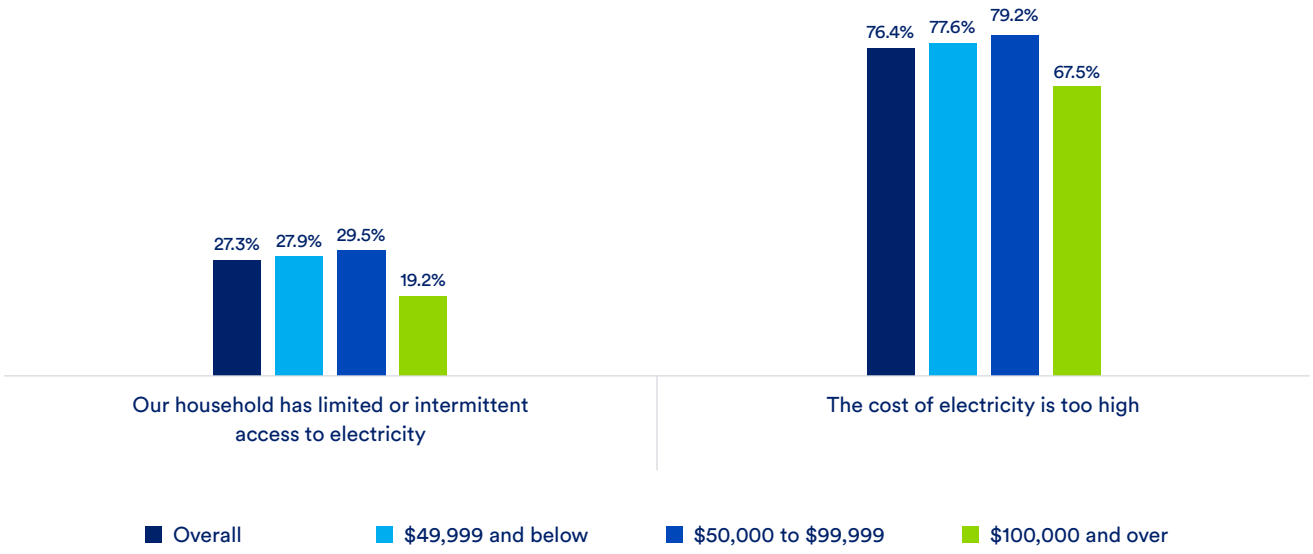
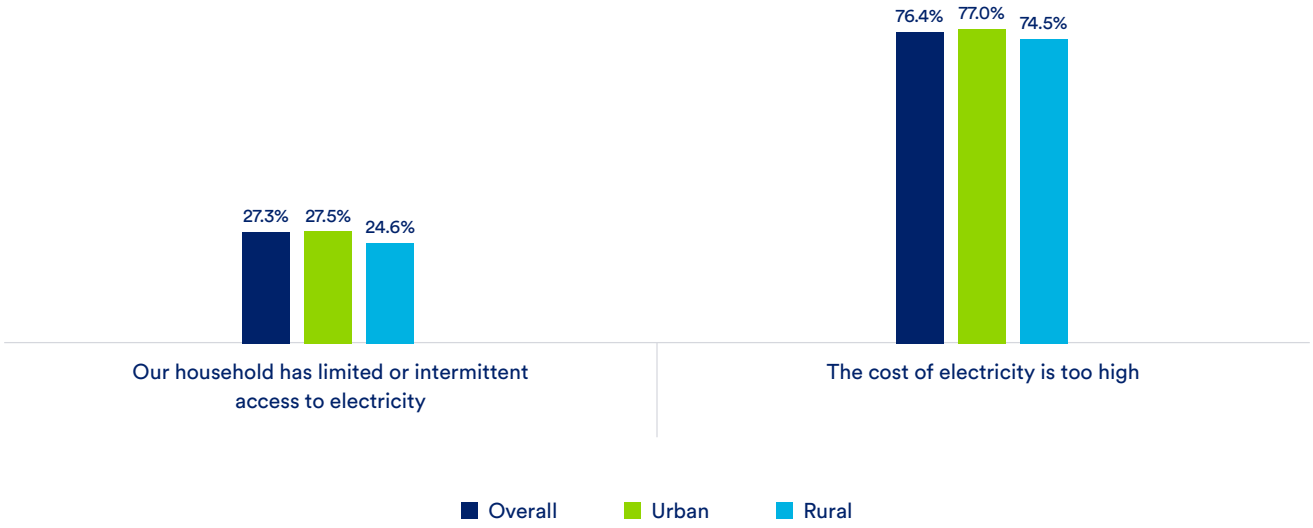


Figure 71: "Strongly" Or "Somewhat" Agree by Place of Residence[34]



[33] The cross-tabulation for the income question omits the option "Don't know/ Refused".

[34] The cross-tabulation for "Urban" and "Rural" includes only respondents who provided a zip code, where as "Overall" includes all respondents.

Q20. Please rate the following challenges or obstacles with regards to finding employment or advancing your career.

Figure 72: "Considerable" or "Somewhat" Challenge to Career Advancement by Race

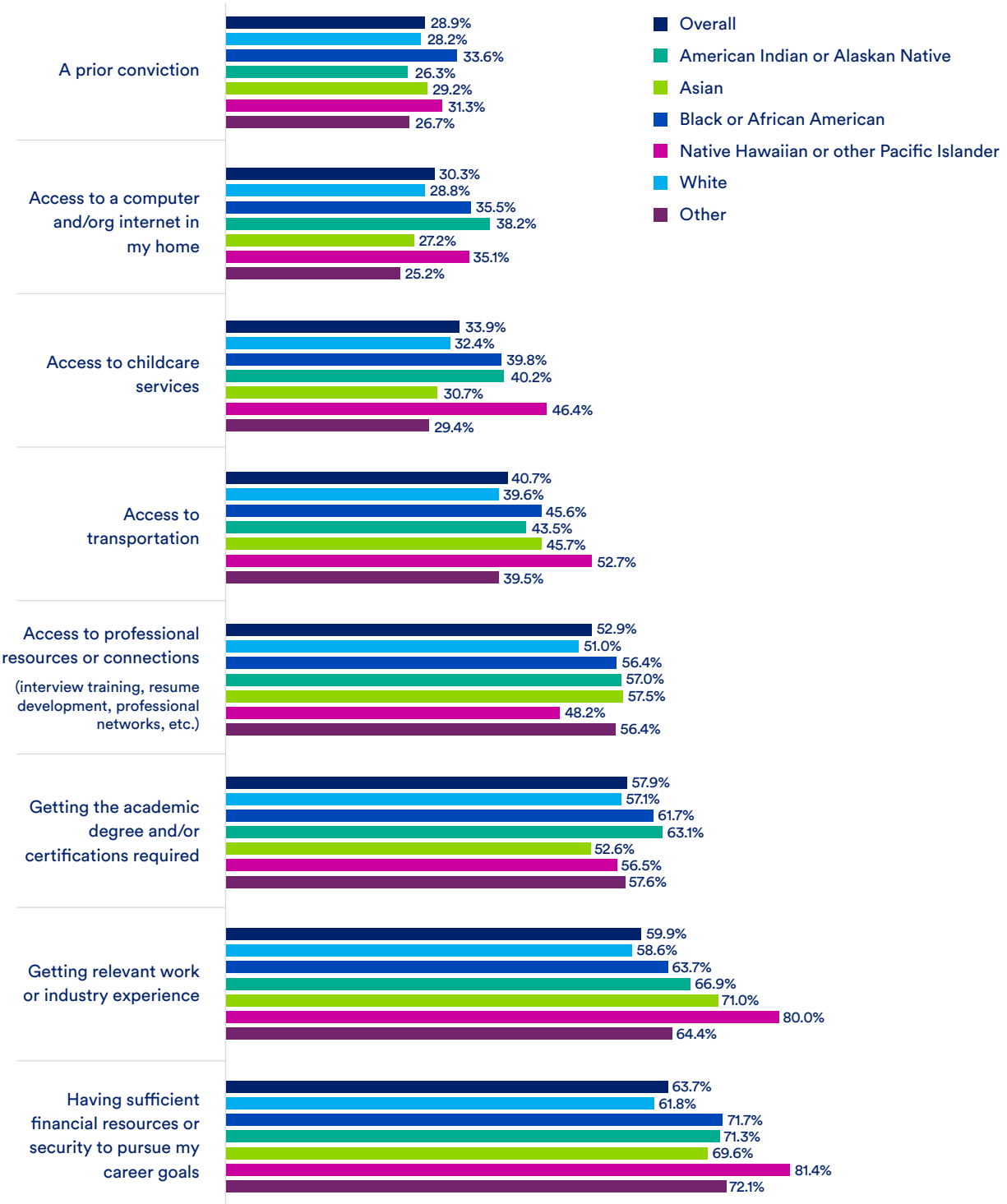


Figure 73: "Considerable" or "Somewhat" Challenge to Career Advancement by Ethnicity

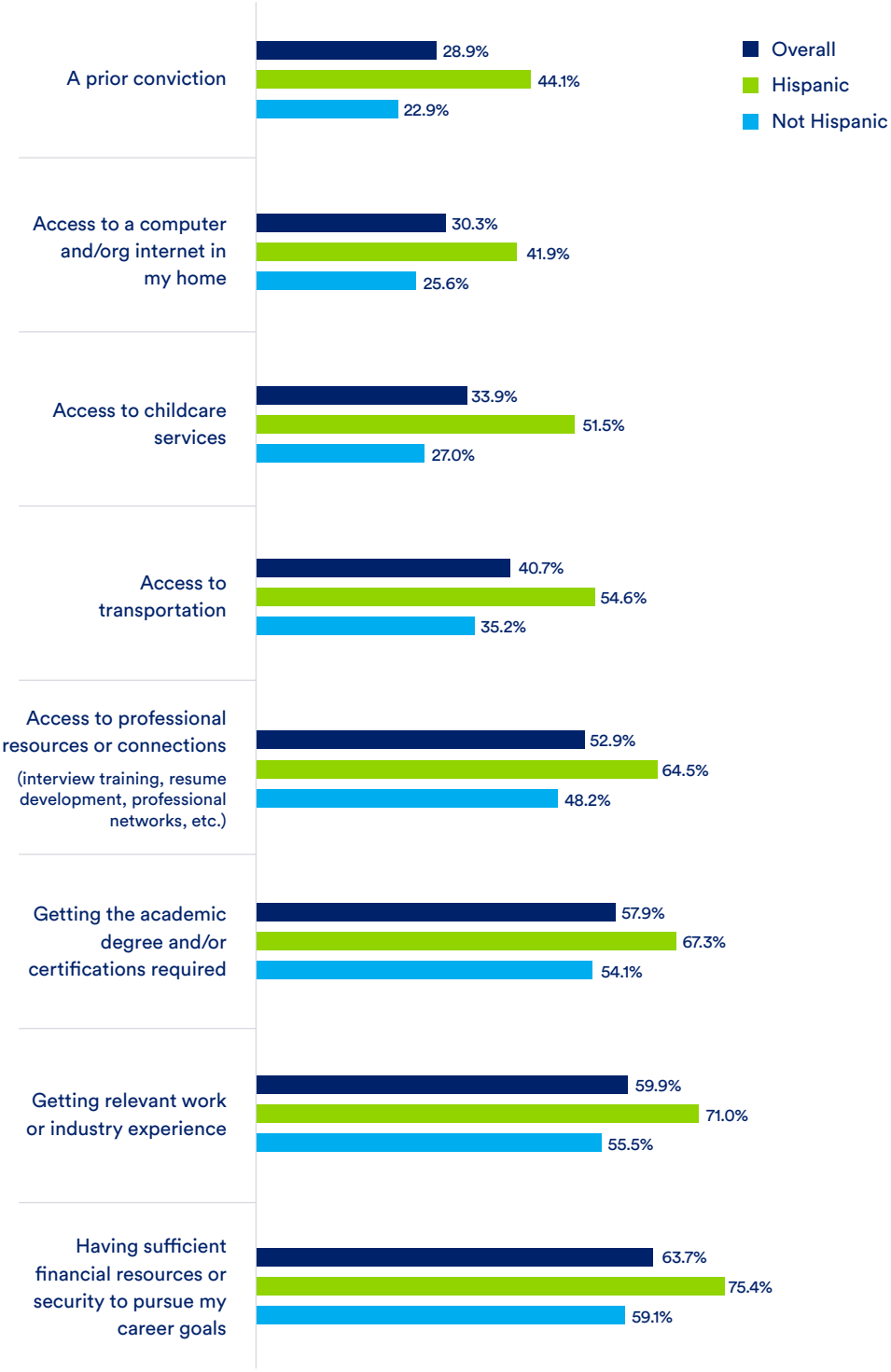
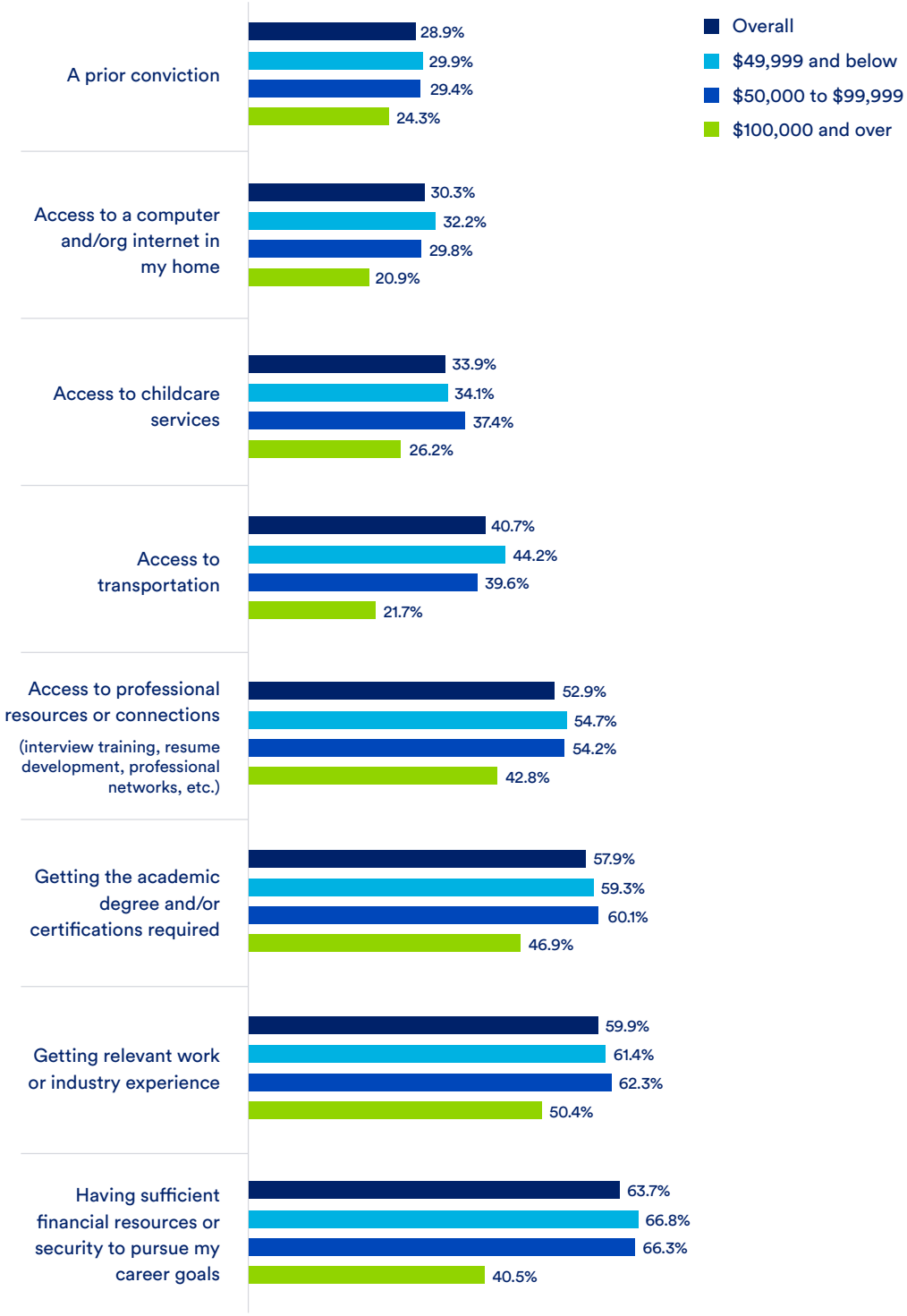
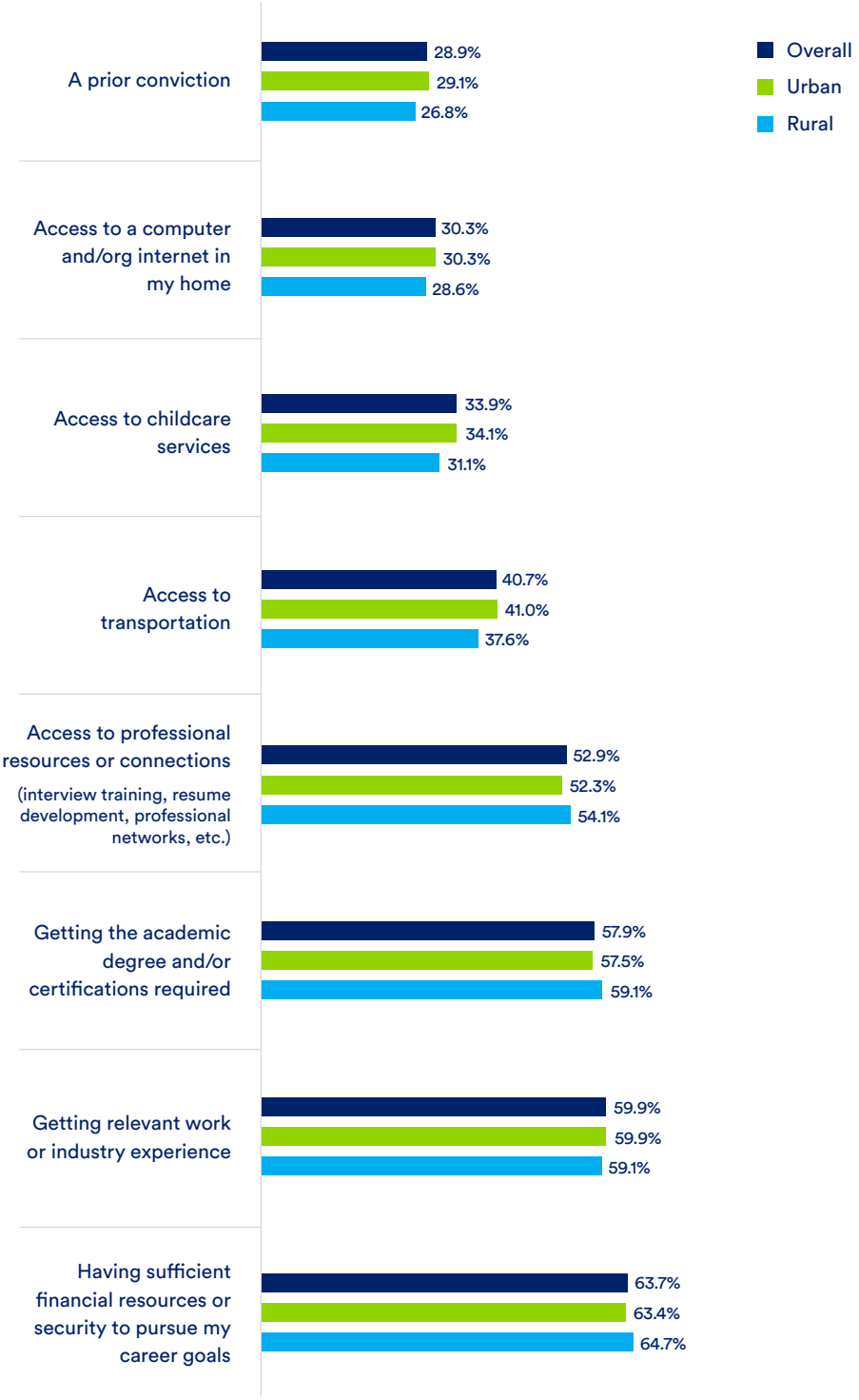


Figure 74: "Considerable" or "Somewhat" Challenge to Career Advancement by Income Level[35]



[35] The cross-tabulation for the income question omits the option "Don't know/ Refused".

Figure 75: "Considerable" or "Somewhat" Challenge to Career Advancement by Place of Residence[36]



[36] The cross-tabulation for "Urban" and "Rural" includes only respondents who provided a zip code, where as "Overall" includes all respondents.

Sewer, Ironbound Community, Newark, NJ

SECTION 6

Survey Methodology

Prior to beginning the project, BW Research met with the Clean Air Task Force (CATF) staff to determine the research objectives for the 2022 study. Through an iterative process, BW Research worked closely with CATF to develop a survey instrument that met all the research objectives of the study. In developing the instrument, BW Research utilized techniques to overcome known biases in survey research and minimize potential sources of measurement error within the survey.

The table below provides an overview of the methodology utilized for the project.

Table 2: Overview of Project Methodology

Method	Telephone, SMS Message, and Online Survey (Email & Panel)
Universe	230,423,323[37] Residents 18 Years and Older within the United States
Number of Respondents	3,012 United States Residents 18 Years and Older Completed a Survey
Average Length	Phone Interview 18 minutes, Online Survey 12 minutes
Field Dates	December 28th, 2021 through October 4th, 2022
Margin of Error	The maximum overall margin of error for questions answered by all 3,012 respondents was +/-1.79% (95% level of confidence)

[37] American Community Survey (ACS) 2021 1-year Estimates, United States Census Bureau

Sampling Method

BW Research utilized a mixed-method sampling plan that incorporated phone calls to landline and cell phones, SMS messages, and email invites to United States residents. Respondents were contacted from listed consumer sample, landline and cell lists, and invites to a panel of residents provided by a third party. Each respondent was required to answer several screener questions to determine eligibility for the survey.

Data Collection

BW Research programmed the survey for online data collection. The survey was programmed into English, Spanish, Portuguese, Korean, Vietnamese, and Chinese (traditional). The web survey instrument was pre-tested in-house and updated as needed. ReconMR called respondents to complete over the phone and distributed surveys via SMS messaging. Respondents were offered a $25 gift card (Visa, Target, Walmart, or Amazon) upon completion of the survey. Throughout data collection, BW Research checked the data for accuracy and completion.

Weighting Survey Data

Survey weights were applied to the final data to ensure that the respondents were representative by race and age and to minimize the impact of non-response bias. Weights were applied to ensure that those proportions match U.S. Census Bureau data. The following table includes the weights applied to each demographic group. Weights above one (1) indicate certain cohorts that were underrepresented in the final survey data whereas weights below one (1) indicate groups that were initially overrepresented in the final survey data. It should be noted that because the survey results were weighted, the n's reported for each question may not be equivalent to the expected n based on the percentage calculation.

Table 3: Applied Survey Weights by Race and Age

	18 to 24 years old	25 to 34 years	35 to 44 years old	45 to 64 years old	65 years or older
White	0.908847	0.719841	0.807785	1.352262	1.908592
Black or African American	0.588298	0.423749	0.342948	0.383199	0.475788
Asian	0.294447	0.236171	0.180349	0.290639	0.171147
American Indian or Alaskan Native	1.745217	2.730218	3.000000	2.381071	3.000000
Native Hawaiian or other Pacific Islander	0.187330	0.129248	0.185546	3.000000	0.756458
Other	1.949647	1.392605	1.660414	1.571144	1.392605

Table 4: Margin of Error (MOE) Estimates

	MOE
White	2.3%
Black or African American	3.3%
Asian	8.1%
American Indian or Alaskan Native	9.2%
Native Hawaiian or other Pacific Islander	16.8%
Other	8.3%

The table on the left shows the margin of error for each demographic group included prior to weighting.

Confidence Intervals for Survey Results

The following section includes the confidence intervals or upper and lower bounds for all tables and figures in the report. The results below include endpoints for the 95% and 99% confidence interval and can be referenced directly back to the report by following table and figure numbers.

Table 5: Completion Rates by Demographic & Income Group[38]

		95% Confidence Interval		99% Confidence Interval	
	Percent of Respondents	Lower Confidence Interval %	Upper Confidence Interval %	Lower Confidence Interval %	Upper Confidence Interval %
Female	58.7%	56.6%	60.8%	55.9%	61.4%
Male	38.8%	36.8%	40.9%	36.1%	41.5%
Gender Non-Binary	1.8%	1.2%	2.4%	1.1%	2.5%
Hispanic or Latino	28.5%	26.6%	30.5%	26.0%	31.1%
Not Hispanic or Latino	71.5%	69.5%	73.4%	68.9%	74.0%
Black or African American	15.6%	14.3%	17.0%	13.9%	17.4%
White	73.0%	71.2%	74.9%	70.6%	75.4%
Asian	3.4%	2.5%	4.3%	2.2%	4.6%
American Indian or Alaskan Native	9.9%	8.2%	11.6%	7.6%	12.1%
Native Hawaiian or other Pacific Islander	1.3%	0.7%	2.0%	0.5%	2.2%
Other	7.9%	6.6%	9.2%	6.2%	9.6%
The City/ Urban Area	40.3%	1,374	38.2%	42.3%	37.6%
A Suburban Area/ Outside the City	37.5%	1,068	35.5%	39.6%	34.8%
The Country/ Rural Area	22.2%	570	20.4%	24.0%	19.8%
Below $25,000	27.9%	26.0%	29.8%	25.4%	30.5%
$25,000 to $49,999	33.0%	31.0%	35.0%	30.3%	35.6%
$50,000 to $74,999	24.2%	22.4%	26.0%	21.8%	26.5%
$75,000 to $99,999	5.3%	4.3%	6.2%	4.0%	6.5%
$100,000 to $150,000	3.8%	3.0%	4.6%	2.8%	4.9%
More than $150,000	3.0%	2.3%	3.7%	2.1%	3.9%

[38] It should be noted that because the survey results were weighted the n's reported for each question may not be equivalent to the expected n based on the percentage calculation.
The gender question omits the options "Other" and "Prefer not to say", n's may not sum to 3,012.
The race question allowed respondents to select multiple races, n's may not sum to 3,012.
The income question omits the option "Don't know/ Refused", n's may not sum to 3,012.

Table 6: Overall Environmental Concern

		95% Confidence Interval		99% Confidence Interval	
	Percent of Respondents	Lower Confidence Interval %	Upper Confidence Interval %	Lower Confidence Interval %	Upper Confidence Interval %
Below $25,000	27.9%	26.0%	29.8%	25.4%	30.5%
$25,000 to $49,999	33.0%	31.0%	35.0%	30.3%	35.6%
$50,000 to $74,999	24.2%	22.4%	26.0%	21.8%	26.5%

Table 7: Concern With Specific Environmental Issues (Unaided)

		95% Confidence Interval		99% Confidence Interval	
	Percent of Respondents	Lower Confidence Interval %	Upper Confidence Interval %	Lower Confidence Interval %	Upper Confidence Interval %
Waste/ garbage	32.8%	29.5%	36.1%	28.5%	37.1%
Water quality	25.2%	22.1%	28.3%	21.1%	29.3%
Climate change/ Global warming	23.4%	20.5%	26.3%	19.5%	27.3%
Air quality	20.0%	17.2%	22.8%	16.4%	23.7%
Extreme weather events (floods, hurricanes, droughts, etc.)	10.9%	8.8%	13.1%	8.1%	13.7%
Pollution from industrial refineries (incl. energy production)	7.1%	5.1%	9.0%	4.5%	9.6%
Deforestation	4.9%	3.5%	6.4%	3.0%	6.8%
Car/ truck emissions	4.2%	2.7%	5.7%	2.3%	6.2%
Industrial mining and extraction (incl. abandoned mines)	1.1%	0.3%	1.9%	0.1%	2.1%
Agricultural pesticides	0.8%	0.2%	1.4%	0.1%	1.6%
Other	7.8%	5.8%	9.8%	5.1%	10.5%
Don't know/ Refused	28.3%	25.2%	31.5%	24.2%	32.5%

Table 8: Concern With Specific Environmental Issues (Aided)

	Very concerned	Somewhat concerned	Not at all concerned	Not an issue in my community	Don't know/ Refused
Severe weather events (sea level rise, heat waves, droughts, storms, hurricanes, floods	30.6%	37.0%	16.4%	13.1%	2.8%
95% Confidence Interval – Lower Confidence interval	28.7%	35.0%	14.8%	11.7%	2.1%
95% Confidence Interval – Upper Confidence interval	32.6%	39.1%	18.0%	14.6%	3.5%
99% Confidence Interval – Lower Confidence interval	28.1%	34.3%	14.3%	11.2%	1.9%
99% Confidence Interval – Upper Confidence interval	33.2%	39.7%	18.5%	15.1%	3.7%
Air quality (pollution, emissions, dust, vehicle exhaust	32.8%	34.5%	16.9%	12.9%	2.8%
95% Confidence Interval – Lower Confidence interval	30.9%	32.5%	15.3%	11.5%	2.2%
95% Confidence Interval – Upper Confidence interval	34.8%	36.5%	18.5%	14.4%	3.5%
99% Confidence Interval – Lower Confidence interval	30.2%	31.8%	14.8%	11.0%	2.0%
99% Confidence Interval – Upper Confidence interval	35.5%	37.2%	19.0%	14.9%	3.7%
Water quality and access to clean water (water supply, lead pipes, contamination	35.1%	30.7%	15.4%	16.1%	2.8%
95% Confidence Interval – Lower Confidence interval	33.0%	28.8%	13.8%	14.5%	2.1%
95% Confidence Interval – Upper Confidence interval	37.1%	32.7%	16.9%	17.7%	3.5%
99% Confidence Interval – Lower Confidence interval	32.4%	28.1%	13.4%	14.0%	1.9%
99% Confidence Interval – Upper Confidence interval	37.7%	33.3%	17.4%	18.2%	3.7%

Table 9: Health Impacts From Environmental Issues

	Major effect	Moderate effect	Minor effect	No effect	Don't know/ Refused
Air quality (pollution, emissions, dust, vehicle exhaust)	30.6%	37.0%	16.4%	13.1%	2.8%
95% Confidence Interval – Lower Confidence interval	28.7%	35.0%	14.8%	11.7%	2.1%
95% Confidence Interval – Upper Confidence interval	32.6%	39.1%	18.0%	14.6%	3.5%
99% Confidence Interval – Lower Confidence interval	28.1%	34.3%	14.3%	11.2%	1.9%
99% Confidence Interval – Upper Confidence interval	33.2%	39.7%	18.5%	15.1%	3.7%
Severe weather events (sea level rise, heat waves, droughts, storms, hurricanes, floods)	23.0%	26.3%	21.6%	24.9%	4.1%
95% Confidence Interval – Lower Confidence interval	21.3%	24.5%	19.9%	23.0%	3.3%
95% Confidence Interval – Upper Confidence interval	24.8%	28.2%	23.4%	26.7%	5.0%
99% Confidence Interval – Lower Confidence interval	20.7%	23.9%	19.3%	22.4%	3.1%
99% Confidence Interval – Upper Confidence interval	25.4%	28.8%	24.0%	27.3%	5.2%
Water quality and access to clean water (water supply, lead pipes, contamination)	22.5%	21.4%	15.9%	27.9%	4.2%
95% Confidence Interval – Lower Confidence interval	26.1%	25.0%	19.2%	31.8%	6.1%
95% Confidence Interval – Upper Confidence interval	21.9%	20.8%	15.4%	27.2%	3.9%
99% Confidence Interval – Lower Confidence interval	26.6%	25.6%	19.7%	32.4%	6.4%
99% Confidence Interval – Upper Confidence interval	37.7%	33.3%	17.4%	18.2%	3.7%

Table 10: Concern With Health Impacts of Environmental Issues

	Strongly agree	Somewhat agree	Neither	Somewhat disagree	Strongly disagree	Don't know/ Refused
I am concerned about the health effects of environmental pollutants in my community	29.7%	33.0%	17.5%	7.9%	8.5%	3.5%
95% Confidence Interval – Lower Confidence interval	27.7%	31.0%	15.8%	6.7%	7.2%	2.7%
95% Confidence Interval – Upper Confidence interval	31.6%	35.0%	19.1%	9.1%	9.7%	4.2%
99% Confidence Interval – Lower Confidence interval	27.1%	30.4%	15.3%	6.4%	6.8%	2.4%
99% Confidence Interval – Upper Confidence interval	32.2%	35.7%	19.6%	9.5%	10.1%	4.5%
Environmental pollutants in my community have affected my health or the health of individuals in my household or neighborhood	20.4%	26.2%	22.8%	10.6%	14.4%	5.6%
95% Confidence Interval – Lower Confidence interval	18.7%	24.4%	21.0%	9.3%	12.8%	4.6%
95% Confidence Interval – Upper Confidence interval	22.1%	28.1%	24.6%	12.0%	15.9%	6.6%
99% Confidence Interval – Lower Confidence interval	18.2%	23.8%	20.4%	8.8%	12.3%	4.3%
99% Confidence Interval – Upper Confidence interval	22.6%	28.7%	25.1%	12.4%	16.4%	6.9%

Table 11: Experience With Severe Weather Events

		95% Confidence Interval		99% Confidence Interval	
	Percent	Lower Confidence Interval %	Upper Confidence Interval %	Lower Confidence Interval %	Upper Confidence Interval %
Storms	59.8%	57.7%	61.9%	57.1%	62.6%
Heat waves	43.5%	41.4%	45.7%	40.7%	46.3%
Droughts	36.0%	33.9%	38.1%	33.3%	38.8%
Floods	31.9%	30.0%	33.9%	29.4%	34.5%
Hurricanes	25.7%	23.9%	27.5%	23.3%	28.1%
No, I have never experienced a severe weather event in my community	6.3%	5.4%	7.3%	5.0%	7.6%
Other	3.1%	2.3%	3.9%	2.1%	4.1%
Don't know/ Refused	1.0%	0.5%	1.5%	0.3%	1.7%

Table 12: Clean Energy Technology Awareness

		95% Confidence Interval		99% Confidence Interval	
	Percent	Lower Confidence Interval %	Upper Confidence Interval %	Lower Confidence Interval %	Upper Confidence Interval %
Solar	72.0%	70.1%	73.9%	69.5%	74.5%
Wind	61.4%	59.4%	63.5%	58.7%	64.1%
Electric vehicles (incl. other alternative transportation)	57.5%	55.4%	59.5%	54.7%	60.2%
Energy Efficiency	47.0%	44.8%	49.1%	44.2%	49.8%
Hydropower	37.1%	35.0%	39.2%	34.4%	39.9%
Energy storage	23.9%	22.1%	25.7%	21.5%	26.2%
Advanced nuclear	14.0%	12.5%	15.5%	12.0%	16.0%
Grid modernization technologies (smart grid and microgrids)	14.0%	12.5%	15.5%	12.1%	16.0%
Carbon capture technologies	12.9%	11.4%	14.3%	10.9%	14.8%
Green hydrogen	11.5%	10.1%	12.9%	9.7%	13.4%
None of the above	7.3%	6.1%	8.4%	5.8%	8.7%
Don't know/ Refused	3.6%	2.8%	4.4%	2.6%	4.6%

Table 13: Clean Energy Industry Perceptions

	Strongly agree	Somewhat agree	Neither	Somewhat disagree	Strongly disagree	Don't know/ Refused
The clean energy industry could be a source of well-paying jobs for my community	33.5%	33.1%	16.8%	5.5%	2.7%	8.4%
95% Confidence Interval – Lower Confidence interval	31.5%	31.1%	15.2%	4.4%	2.0%	7.2%
95% Confidence Interval – Upper Confidence interval	35.5%	35.1%	18.4%	6.5%	3.4%	9.6%
99% Confidence Interval – Lower Confidence interval	30.9%	30.5%	14.7%	4.1%	1.8%	6.8%
99% Confidence Interval – Upper Confidence interval	36.2%	35.7%	18.9%	6.8%	3.6%	9.9%
Energy production from renewable resources would reduce environmental pollution in my community	33.0%	32.6%	17.9%	5.0%	3.2%	8.3%
95% Confidence Interval – Lower Confidence interval	31.0%	30.6%	16.3%	4.0%	2.5%	7.1%
95% Confidence Interval – Upper Confidence interval	35.0%	34.6%	19.6%	6.0%	4.0%	9.5%
99% Confidence Interval – Lower Confidence interval	30.4%	30.0%	15.8%	3.7%	2.2%	6.7%
99% Confidence Interval – Upper Confidence interval	35.6%	35.2%	20.1%	6.3%	4.2%	9.9%
I would approve of siting new clean energy infrastructure in my community	33.0%	32.6%	17.9%	5.0%	3.2%	8.3%
95% Confidence Interval – Lower Confidence interval	30.2%	31.2%	17.6%	3.1%	2.4%	7.0%
95% Confidence Interval – Upper Confidence interval	34.1%	35.2%	21.0%	4.8%	3.9%	9.4%
99% Confidence Interval – Lower Confidence interval	29.6%	30.6%	17.1%	2.9%	2.1%	6.6%
99% Confidence Interval – Upper Confidence interval	34.8%	35.9%	21.6%	5.1%	4.1%	9.8%
The transition to cleaner sources of energy production would result in job losses in my community	14.2%	21.2%	22.8%	16.4%	12.9%	12.5%
95% Confidence Interval – Lower Confidence interval	12.8%	19.5%	21.0%	14.8%	11.4%	11.0%
95% Confidence Interval – Upper Confidence interval	15.7%	23.0%	24.6%	18.0%	14.3%	13.9%
99% Confidence Interval – Lower Confidence interval	12.4%	19.0%	20.5%	14.2%	11.0%	10.6%
99% Confidence Interval – Upper Confidence interval	16.1%	23.5%	25.1%	18.5%	14.8%	14.3%

Table 14: Energy Career Interests

	Very interested	Interested	Somewhat interested	Not at all interested	Don't know/ Refused
Renewable energy (solar, wind, etc.)	26.9%	22.7%	22.1%	22.2%	6.1%
95% Confidence Interval – Lower Confidence interval	25.0%	21.0%	20.4%	20.4%	5.0%
95% Confidence Interval – Upper Confidence interval	28.8%	24.4%	23.9%	24.0%	7.2%
99% Confidence Interval – Lower Confidence interval	24.4%	20.4%	19.8%	19.8%	4.7%
99% Confidence Interval – Upper Confidence interval	29.3%	25.0%	24.5%	24.6%	7.5%
Energy efficiency (retrofitting buildings or installing energy efficient technologies)	21.4%	23.8%	23.1%	25.8%	5.9%
95% Confidence Interval – Lower Confidence interval	19.7%	22.0%	21.3%	23.9%	4.8%
95% Confidence Interval – Upper Confidence interval	23.1%	25.5%	25.0%	27.7%	6.9%
99% Confidence Interval – Lower Confidence interval	19.2%	21.4%	20.8%	23.3%	4.5%
99% Confidence Interval – Upper Confidence interval	23.7%	26.1%	25.5%	28.3%	7.2%
Electric vehicles and other alternative transportation	22.6%	20.3%	22.6%	28.5%	6.1%
95% Confidence Interval – Lower Confidence interval	20.8%	18.6%	20.8%	26.5%	5.0%
95% Confidence Interval – Upper Confidence interval	24.3%	21.9%	24.3%	30.4%	7.2%
99% Confidence Interval – Lower Confidence interval	20.3%	18.1%	20.2%	25.9%	4.6%
99% Confidence Interval – Upper Confidence interval	24.9%	22.5%	24.9%	31.1%	7.5%
Fossil fuel energy (natural gas, coal, oil)	16.0%	17.3%	21.5%	38.5%	6.7%
95% Confidence Interval – Lower Confidence interval	14.5%	15.7%	19.7%	36.4%	5.6%
95% Confidence Interval – Upper Confidence interval	17.5%	18.8%	23.2%	40.6%	7.9%
99% Confidence Interval – Lower Confidence interval	14.0%	15.2%	19.2%	35.8%	5.3%
99% Confidence Interval – Upper Confidence interval	18.0%	19.3%	23.8%	41.3%	8.2%

Table 15: Clean Energy Career Considerations

		95% Confidence Interval		99% Confidence Interval	
	Percent	Lower Confidence Interval %	Upper Confidence Interval %	Lower Confidence Interval %	Upper Confidence Interval %
No, I have never considered working in the clean energy industry	62.7%	60.7%	64.7%	60.1%	65.4%
Yes, I have considered working in the clean energy industry, but have never actively searched for employment	17.3%	15.8%	18.9%	15.3%	19.4%
Yes, I have actively searched for work opportunities in the clean energy industry	13.2%	11.9%	14.5%	11.5%	14.9%
Don't know/ Refused	6.7%	5.7%	7.8%	5.3%	8.2%

Table 16: Clean Energy Career Barriers

	Strongly agree	Somewhat agree	Neither	Somewhat disagree	Strongly disagree	Don't know/ Refused
I do not have the education or training needed to apply for a clean energy job	34.9%	26.8%	15.6%	8.6%	7.6%	6.4%
95% Confidence Interval – Lower Confidence interval	32.8%	24.9%	14.1%	7.4%	6.4%	5.4%
95% Confidence Interval – Upper Confidence interval	36.9%	28.7%	17.1%	9.8%	8.8%	7.5%
99% Confidence Interval – Lower Confidence interval	32.2%	24.4%	13.6%	7.1%	6.1%	5.0%
99% Confidence Interval – Upper Confidence interval	37.5%	29.3%	17.6%	10.2%	9.2%	7.9%
I am not sure where to find or look for clean energy job postings	27.9%	28.4%	19.9%	8.6%	7.2%	7.9%
95% Confidence Interval – Lower Confidence interval	26.0%	26.5%	18.2%	7.4%	6.1%	6.7%
95% Confidence Interval – Upper Confidence interval	29.8%	30.3%	21.6%	9.8%	8.4%	9.1%
99% Confidence Interval – Lower Confidence interval	25.4%	25.9%	17.7%	7.1%	5.7%	6.4%
99% Confidence Interval – Upper Confidence interval	30.4%	30.9%	22.2%	10.1%	8.8%	9.5%
I am aware of clean energy job opportunities near where I live	12.0%	18.3%	19.0%	16.4%	24.9%	9.5%
95% Confidence Interval – Lower Confidence interval	10.7%	16.7%	17.3%	14.8%	23.0%	8.2%
95% Confidence Interval – Upper Confidence interval	13.3%	19.9%	20.6%	18.0%	26.8%	10.8%
99% Confidence Interval – Lower Confidence interval	10.3%	16.2%	16.7%	14.3%	22.4%	7.8%
99% Confidence Interval – Upper Confidence interval	13.7%	20.4%	21.2%	18.5%	27.4%	11.2%

Table 17: Likelihood of Applying to Renewable or Non-Renewable Energy Position

	Very likely	Somewhat likely	Not at all likely	Don't know/ Refused
Renewable Energy Job	21.3%	36.4%	32.9%	9.5%
95% Confidence Interval – Lower Confidence interval	19.6%	34.4%	30.8%	8.2%
95% Confidence Interval – Upper Confidence interval	22.9%	38.5%	34.9%	10.7%
99% Confidence Interval – Lower Confidence interval	19.1%	33.7%	30.2%	7.8%
99% Confidence Interval – Upper Confidence interval	23.5%	39.1%	35.5%	11.1%
Non-Renewable Energy Job	15.6%	27.6%	47.3%	9.5%
95% Confidence Interval – Lower Confidence interval	14.1%	25.7%	45.1%	8.3%
95% Confidence Interval – Upper Confidence interval	17.0%	29.5%	49.4%	10.8%
99% Confidence Interval – Lower Confidence interval	13.6%	25.1%	44.5%	7.9%
99% Confidence Interval – Upper Confidence interval	17.5%	30.1%	50.1%	11.2%

Table 18: Civic Engagement Importance and Influence

	Strongly agree	Somewhat agree	Neither	Somewhat disagree	Strongly disagree
Participation and engagement in community issues is important to me	21.1%	29.8%	27.1%	10.4%	7.4%
95% Confidence Interval – Lower Confidence interval	19.4%	27.9%	25.2%	9.0%	6.2%
95% Confidence Interval – Upper Confidence interval	22.8%	31.7%	29.0%	11.8%	8.6%
99% Confidence Interval – Lower Confidence interval	18.8%	27.3%	24.6%	8.6%	5.9%
99% Confidence Interval – Upper Confidence interval	23.3%	32.3%	29.6%	12.2%	8.9%
My voice and actions can influence local policy outcomes	19.2%	31.2%	22.3%	12.1%	9.8%
95% Confidence Interval – Lower Confidence interval	17.5%	29.3%	20.5%	10.7%	8.5%
95% Confidence Interval – Upper Confidence interval	20.8%	33.1%	24.0%	13.5%	11.2%
99% Confidence Interval – Lower Confidence interval	17.0%	28.6%	19.9%	10.2%	8.0%
99% Confidence Interval – Upper Confidence interval	21.4%	33.7%	24.6%	14.0%	11.6%

Table 19: Frequency of Civic Engagement

	Regularly (at least once a week)	Sometimes (once or a few times a month)	Seldom (less than once / month on average)	Never	Don't know/ Refused	Don't know/ Refused
Express your opinions on community issues through social media or the Internet	34.9%	26.8%	15.6%	8.6%	7.6%	6.4%
95% Confidence Interval – Lower Confidence interval	32.8%	24.9%	14.1%	7.4%	6.4%	5.4%
95% Confidence Interval – Upper Confidence interval	36.9%	28.7%	17.1%	9.8%	8.8%	7.5%
99% Confidence Interval – Lower Confidence interval	32.2%	24.4%	13.6%	7.1%	6.1%	5.0%
99% Confidence Interval – Upper Confidence interval	37.5%	29.3%	17.6%	10.2%	9.2%	7.9%
Raise awareness or money for an issue, campaign, party, or group	27.9%	28.4%	19.9%	8.6%	7.2%	7.9%
95% Confidence Interval – Lower Confidence interval	26.0%	26.5%	18.2%	7.4%	6.1%	6.7%
95% Confidence Interval – Upper Confidence interval	29.8%	30.3%	21.6%	9.8%	8.4%	9.1%
99% Confidence Interval – Lower Confidence interval	25.4%	25.9%	17.7%	7.1%	5.7%	6.4%
99% Confidence Interval – Upper Confidence interval	30.4%	30.9%	22.2%	10.1%	8.8%	9.5%
Attend a political meeting on local, town, or school affairs	12.0%	18.3%	19.0%	16.4%	24.9%	9.5%
95% Confidence Interval – Lower Confidence interval	10.7%	16.7%	17.3%	14.8%	23.0%	8.2%
95% Confidence Interval – Upper Confidence interval	13.3%	19.9%	20.6%	18.0%	26.8%	10.8%
99% Confidence Interval – Lower Confidence interval	10.3%	16.2%	16.7%	14.3%	22.4%	7.8%
99% Confidence Interval – Upper Confidence interval	13.7%	20.4%	21.2%	18.5%	27.4%	11.2%
An active member of any group that tries to influence local public policy	9.6%	13.7%	18.9%	52.5%	5.3%	6.4%
95% Confidence Interval – Lower Confidence interval	8.5%	12.3%	17.3%	50.4%	4.3%	5.4%
95% Confidence Interval – Upper Confidence interval	10.8%	15.2%	20.5%	54.6%	6.2%	7.5%
99% Confidence Interval – Lower Confidence interval	8.1%	11.9%	16.7%	49.7%	4.0%	5.0%
99% Confidence Interval – Upper Confidence interval	11.1%	15.6%	21.1%	55.3%	6.5%	7.9%

Table 20: Environmental Information News Sources

		95% Confidence Interval		99% Confidence Interval	
	Percent	Lower Confidence Interval %	Upper Confidence Interval %	Lower Confidence Interval %	Upper Confidence Interval %
Local/ regional television station	52.9%	50.7%	55.0%	50.1%	55.7%
Social media	52.6%	50.4%	54.7%	49.7%	55.4%
Local newspaper	33.6%	31.6%	35.6%	30.9%	36.3%
Radio	24.7%	22.9%	26.5%	22.3%	27.1%
Other	5.5%	4.5%	6.5%	4.2%	6.8%
None of the above	7.2%	6.1%	8.4%	5.7%	8.7%
Don't know/ Refused	3.4%	2.6%	4.2%	2.4%	4.5%

Table 21: Trust for Various Information Sources

	A lot of trust	Some trust	Little trust	No trust	Don't know/ Refused
A scientist	35.3%	35.4%	15.4%	7.1%	6.9%
95% Confidence Interval – Lower Confidence interval	33.3%	33.3%	13.8%	5.9%	5.8%
95% Confidence Interval – Upper Confidence interval	37.3%	37.4%	17.0%	8.2%	8.0%
99% Confidence Interval – Lower Confidence interval	32.6%	32.7%	13.4%	5.6%	5.4%
99% Confidence Interval – Upper Confidence interval	37.9%	38.1%	17.5%	8.5%	8.3%
A family member or friend	26.3%	40.0%	20.6%	5.6%	7.5%
95% Confidence Interval – Lower Confidence interval	24.5%	37.9%	18.9%	4.6%	6.3%
95% Confidence Interval – Upper Confidence interval	28.2%	42.1%	22.4%	6.5%	8.6%
99% Confidence Interval – Lower Confidence interval	23.9%	37.3%	18.3%	4.3%	6.0%
99% Confidence Interval – Upper Confidence interval	28.8%	42.8%	22.9%	6.8%	9.0%
An environmental organization	25.1%	36.6%	21.2%	9.9%	7.2%
95% Confidence Interval – Lower Confidence interval	23.3%	34.5%	19.4%	8.6%	6.1%
95% Confidence Interval – Upper Confidence interval	27.0%	38.6%	23.0%	11.2%	8.3%
99% Confidence Interval – Lower Confidence interval	22.7%	33.9%	18.8%	8.2%	5.7%
99% Confidence Interval – Upper Confidence interval	27.5%	39.3%	23.5%	11.6%	8.6%

Table 21 continued

	A lot of trust	Some trust	Little trust	No trust	Don't know/ Refused
A local community organization or activist group	15.7%	38.4%	25.7%	12.0%	8.3%
95% Confidence Interval – Lower Confidence interval	14.2%	36.3%	23.8%	10.5%	7.1%
95% Confidence Interval – Upper Confidence interval	17.2%	40.4%	27.6%	13.4%	9.5%
99% Confidence Interval – Lower Confidence interval	13.8%	35.7%	23.2%	10.1%	6.7%
99% Confidence Interval – Upper Confidence interval	17.7%	41.1%	28.2%	13.9%	9.8%
The media (local or national news sources)	12.9%	35.6%	28.8%	16.3%	6.5%
95% Confidence Interval – Lower Confidence interval	11.5%	33.5%	26.9%	14.6%	5.4%
95% Confidence Interval – Upper Confidence interval	14.3%	37.6%	30.7%	17.9%	7.5%
99% Confidence Interval – Lower Confidence interval	11.1%	32.9%	26.3%	14.1%	5.1%
99% Confidence Interval – Upper Confidence interval	14.7%	38.2%	31.3%	18.4%	7.8%
An energy supplier/ company	13.2%	34.4%	29.5%	14.5%	8.3%
95% Confidence Interval – Lower Confidence interval	11.8%	32.4%	27.6%	13.0%	7.1%
95% Confidence Interval – Upper Confidence interval	14.5%	36.5%	31.5%	16.1%	9.5%
99% Confidence Interval – Lower Confidence interval	11.4%	31.8%	27.0%	12.5%	6.7%
99% Confidence Interval – Upper Confidence interval	15.0%	37.1%	32.1%	16.5%	9.9%
A local faith leader	13.7%	28.7%	25.2%	22.5%	9.9%
95% Confidence Interval – Lower Confidence interval	12.3%	26.8%	23.3%	20.7%	8.6%
95% Confidence Interval – Upper Confidence interval	15.1%	30.6%	27.0%	24.3%	11.2%
99% Confidence Interval – Lower Confidence interval	11.9%	26.2%	22.7%	20.1%	8.2%
99% Confidence Interval – Upper Confidence interval	15.5%	31.2%	27.6%	24.9%	11.6%
The government (incl. local politicians)	10.0%	27.9%	29.7%	25.3%	7.2%
95% Confidence Interval – Lower Confidence interval	8.8%	26.0%	27.7%	23.4%	6.1%
95% Confidence Interval – Upper Confidence interval	11.2%	29.8%	31.6%	27.1%	8.3%
99% Confidence Interval – Lower Confidence interval	8.4%	25.4%	27.1%	22.8%	5.7%
99% Confidence Interval – Upper Confidence interval	11.5%	30.4%	32.2%	27.7%	8.6%

Table 22: Electricity Cost & Access

	Strongly agree	Somewhat agree	Neither	Somewhat disagree	Strongly disagree
The cost of electricity is too high	43.7%	32.7%	13.0%	4.3%	2.6%
95% Confidence Interval – Lower Confidence interval	41.6%	30.7%	11.6%	3.4%	1.9%
95% Confidence Interval – Upper Confidence interval	45.8%	34.7%	14.5%	5.2%	3.3%
99% Confidence Interval – Lower Confidence interval	41.0%	30.1%	11.1%	3.1%	1.7%
99% Confidence Interval – Upper Confidence interval	46.5%	35.3%	14.9%	5.4%	3.5%
Our household has limited or intermittent access to electricity	13.1%	14.2%	15.0%	13.1%	39.6%
95% Confidence Interval – Lower Confidence interval	11.7%	12.8%	13.5%	11.6%	37.5%
95% Confidence Interval – Upper Confidence interval	14.5%	15.6%	16.5%	14.6%	41.7%
99% Confidence Interval – Lower Confidence interval	11.2%	12.4%	13.0%	11.2%	36.8%
99% Confidence Interval – Upper Confidence interval	14.9%	16.0%	17.0%	15.0%	42.4%

Table 23: Electricity Cost Reduction Awareness

		95% Confidence Interval		99% Confidence Interval	
	Percent	Lower Confidence Interval %	Upper Confidence Interval %	Lower Confidence Interval %	Upper Confidence Interval %
Yes	13.0%	11.5%	14.5%	11.1%	14.9%
No	76.7%	74.9%	78.5%	74.3%	79.1%
Don't know/ Refused	10.3%	9.0%	11.6%	8.6%	12.0%

Table 24: Career Advancement Challenges

	A lot of trust	Some trust	Little trust	No trust
Having sufficient financial resources or security to pursue my career goals	30.0%	33.7%	26.8%	9.4%
95% Confidence Interval – Lower Confidence interval	28.1%	31.7%	24.9%	8.2%
95% Confidence Interval – Upper Confidence interval	32.0%	35.7%	28.8%	10.7%
99% Confidence Interval – Lower Confidence interval	27.5%	31.0%	24.3%	7.8%
99% Confidence Interval – Upper Confidence interval	32.6%	36.3%	29.4%	11.1%
Getting relevant work or industry experience	23.3%	36.6%	28.8%	11.3%
95% Confidence Interval – Lower Confidence interval	21.6%	34.5%	26.9%	9.9%
95% Confidence Interval – Upper Confidence interval	25.1%	38.6%	30.8%	12.7%
99% Confidence Interval – Lower Confidence interval	21.0%	33.9%	26.3%	9.4%
99% Confidence Interval – Upper Confidence interval	25.7%	39.2%	31.4%	13.1%
Getting the academic degree and/or certifications required	24.0%	33.9%	32.4%	9.7%
95% Confidence Interval – Lower Confidence interval	22.2%	31.9%	30.4%	8.4%
95% Confidence Interval – Upper Confidence interval	25.8%	35.9%	34.4%	11.0%
99% Confidence Interval – Lower Confidence interval	21.6%	31.2%	29.8%	8.0%
99% Confidence Interval – Upper Confidence interval	26.3%	36.5%	35.1%	11.5%
Access to professional resources or connections (interview training, resume development, professional networks, etc.)	18.1%	34.8%	35.9%	11.3%
95% Confidence Interval – Lower Confidence interval	16.5%	32.8%	33.8%	9.9%
95% Confidence Interval – Upper Confidence interval	19.7%	36.8%	37.9%	12.7%
99% Confidence Interval – Lower Confidence interval	16.0%	32.1%	33.2%	9.4%
99% Confidence Interval – Upper Confidence interval	20.2%	37.4%	38.6%	13.1%
Access to transportation	16.8%	23.9%	52.5%	6.8%
95% Confidence Interval – Lower Confidence interval	15.2%	22.1%	50.3%	5.7%
95% Confidence Interval – Upper Confidence interval	18.3%	25.7%	54.6%	8.0%
99% Confidence Interval – Lower Confidence interval	14.8%	21.6%	49.7%	5.4%
99% Confidence Interval – Upper Confidence interval	18.8%	26.3%	55.3%	8.3%

Table 24 continued

Access to childcare services	14.6%	19.3%	51.6%	14.5%
95% Confidence Interval – Lower Confidence interval	13.1%	17.7%	49.5%	12.9%
95% Confidence Interval – Upper Confidence interval	16.0%	21.0%	53.8%	16.0%
99% Confidence Interval – Lower Confidence interval	12.7%	17.2%	48.8%	12.4%
99% Confidence Interval – Upper Confidence interval	16.5%	21.5%	54.4%	16.5%
Access to a computer and/or internet in my home	12.4%	17.9%	62.9%	6.8%
95% Confidence Interval – Lower Confidence interval	11.0%	16.3%	60.9%	5.7%
95% Confidence Interval – Upper Confidence interval	13.7%	19.5%	65.0%	7.9%
99% Confidence Interval – Lower Confidence interval	10.6%	15.8%	60.2%	5.3%
99% Confidence Interval – Upper Confidence interval	14.2%	20.0%	65.6%	8.3%
A prior conviction	13.2%	15.7%	58.6%	12.5%
95% Confidence Interval – Lower Confidence interval	11.8%	14.3%	56.5%	11.1%
95% Confidence Interval – Upper Confidence interval	14.6%	17.2%	60.6%	13.9%
99% Confidence Interval – Lower Confidence interval	11.4%	13.8%	55.8%	10.6%
99% Confidence Interval – Upper Confidence interval	15.1%	17.6%	61.3%	14.4%