
DROWNED OUT

Massachusetts residents' views of climate change



Barr
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THE **MassINC**
POLLING GROUP

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This year's climate poll marks the fourth in a series dating back to 2011. We at The MassINC Polling Group acknowledge the support of The Barr Foundation, without whom this project would not have been possible. We also recognize the many people and organizations who provided feedback in forming the questionnaire to explore these complex issues. We would particularly like to thank the reporters and editors at The Boston Globe's climate desk, who provided input into the survey questionnaire, an in-depth reported story on the poll, a series of interactive graphics, and a Zoom event. The event featured a stellar panel from the State Senate, GreenRoots and the Conservation Law Foundation.

The interpretation and conclusions in this report are solely the product of The MassINC Polling Group.

We'd like to dedicate this report to our children.

ABOUT THE MASSINC POLLING GROUP

The MassINC Polling Group is a nonpartisan public opinion research firm serving public, private, and social-sector clients. MPG elevates the public's voice with cutting-edge methods and rigorous analysis. Based in Boston, MPG serves a nationwide client base.

INTRODUCTION

Recent scientific reports point to devastating consequences of climate change in the coming decades. Some of these impacts are already underway. Scientists tell us, with growing certainty, that there is a narrow window to reduce carbon emissions and avoid the worst scenarios.

With the level of urgency the scientific community describes, any groups with influence over emissions have a role to play. The most would be accomplished if policy leaders at all levels acted in concert. But with the federal government riven by partisanship and incapable of responding to popular will – and with the Supreme Court drastically curtailing the Environmental Protection Agency’s power to regulate carbon emissions – much of the responsibility falls to state and local policymakers.

Our latest poll finds Massachusetts residents supportive of a range of potential policy actions which would contribute to emission reductions. This year’s climate poll marks the fourth in a series dating back to 2011. Despite this support, Massachusetts residents’ sense of urgency to confront climate change has leveled off or even declined somewhat. Fewer voters call climate a high priority compared to other issues. This mirrors national trends, where urgency has also dropped somewhat.

Climate change may not be a priority for residents due to other pressing concerns. The last poll was conducted in 2019, just before the COVID-19 pandemic began. The pandemic has drawn immense focus from residents and policymakers alike. Residents

are also grappling with historically high housing prices, healthcare costs, an economy threatened by inflation, and education’s halting recovery from COVID-19.

Unfortunately, scientists tell us that action on climate cannot wait for residents’ attention to turn from these myriad issues. Ultimately it is up to policymakers to navigate the gap between residents’ perception of the gravity and urgency of climate change – which is still substantial, even if it has flagged somewhat since 2019 – and the actions needed to head off the worst climate change impacts.

There is plenty of encouraging news in the poll. Massachusetts residents remain overwhelmingly convinced that climate change is real. Majorities support several public policy ideas tested in this survey to address climate change. Residents are already taking some steps on their own, and they can be convinced to do more with the right incentives and guidance from state and local government.

Massachusetts is moving ahead on climate action. While this poll was fielded, the State Legislature was drafting a law to strengthen the state’s climate response. Governor Baker ultimately signed the bill into law. This survey finds Massachusetts residents supportive of action, even if they are not demanding it over other issues. It will be up to lawmakers to weigh public opinion against the urgency that scientists increasingly report is needed, and then to make the case for policy solutions that meet the moment.

EXECUTIVE SUMMARY

Residents continue to see climate change as a serious problem for the state. More than three-quarters (77%) think that climate change, if left unchecked, will pose at least a somewhat serious problem to Massachusetts. This includes nearly half (48%) who think it will be a very serious problem. This “very serious” number declined slightly from 53% in 2019, while the “somewhat serious” number increased from 26% to 29%. Less than 10% think that climate change is not a serious problem at all (6%) or not happening (3%). Seriousness is highest among Democrats, women, and Black and Latino residents. These gaps by race and party are consistent with previous surveys in this series and with national polling on climate change.

Most people believe the impacts of climate change are already being felt in Massachusetts or will be soon. Roughly a third of residents think that various climate impacts like sea level rise, coastal flooding, and more extreme storms are already happening in Massachusetts. Approximately another quarter think these impacts are very likely to be felt in the next 5 years. Very few (under 16%) reported that Massachusetts will escape these climate impacts all together.

Nearly half of residents call climate a high priority for state government. This figure (47%) represents a slight decline from the 2019 survey, but it places climate at the bottom of the priority list of issues explored in this survey. Majorities of women and Black and Latino residents rated climate a high priority, although these demographics rated other issues more highly as well. The largest gap is on political partisanship, with Democrats more likely to rate climate a high priority than Republicans by 40 percentage points. This makes climate a top issue for Democrats, even though the share of Democrats rating climate a high priority has declined since 2019.

There is room to grow personal actions that could help reduce climate emissions. The poll explored eight personal actions which would help reduce carbon emissions. Of this list, majorities report doing only two: recycling and adjusting their thermostats. There is a clear relationship between how seriously residents view climate and amount of activity they are taking to address it. But even some skeptics are taking proactive steps to curb climate change, many of which have other potential motivations.

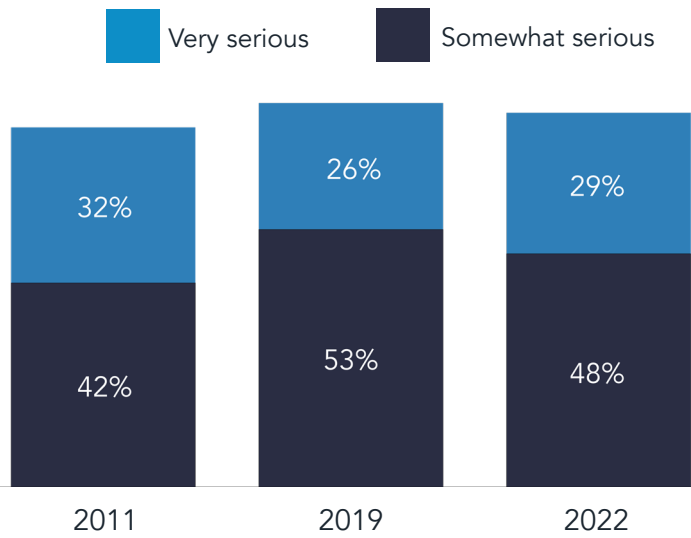
On buildings, there is an important role for government to speed up retrofits and mandate new standards. More than half of homeowners have no plans to install solar panels or heat pumps, or they are unsure. But majorities of homeowners with no short-term plans to make these improvements say that incentives like rebates or tax breaks would prompt them to move up their schedules. And majorities of all residents support policy changes to update the building code to account for climate impacts and to make new and renovated buildings run on renewable energy.

Drivers are split on electric vehicles. Among drivers who do not already own an electric vehicle, 44% say they are at least somewhat likely to get one for their next car. Given how relatively new and expensive these vehicles are, seeing nearly a majority of residents already considering one is a hopeful sign. Still, many remain to be convinced.

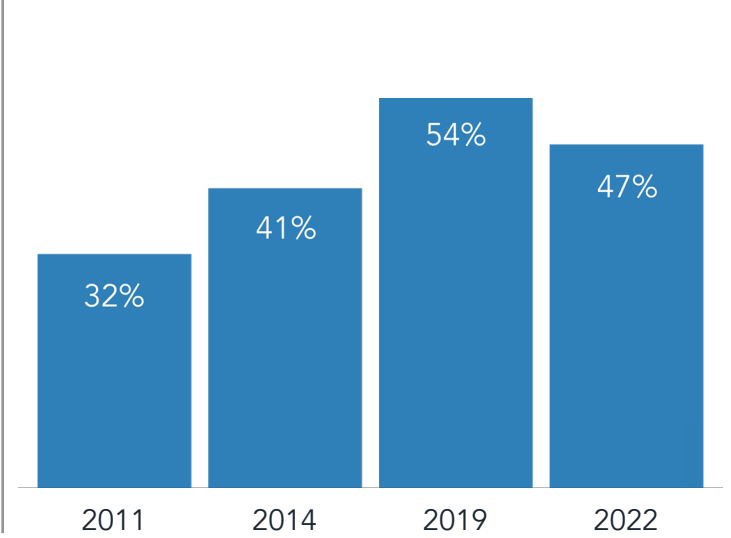
Residents express willingness to walk, bike, and take transit for some trips. Majorities in this survey say they are at least somewhat willing to walk instead of drive for certain trips, to ride a bike if they had protected infrastructure along their route, and to take public transit if certain improvements were made. Even if only a fraction follows through, it could make a big difference for emissions and traffic congestion. Taken together, these findings point towards an “all of the above” strategy when it comes to tackling emissions from transportation.

Seriousness, priority of climate as an issue has declined slightly since the pandemic.

% of residents in each year's poll that consider climate a very or somewhat serious problem



% of residents in each year's poll that consider climate a "high priority" for state government



MAIN FINDINGS

This study is the fourth in a series going back to 2011. It was developed with an eye toward tracking long-term trends and exploring issues pertinent to today's policy environment. This report explores highlights from the poll as well as other climate change related surveys and focus groups conducted by The MassINC Polling Group.

Residents continue to view climate as a serious problem for Massachusetts.

Three-quarters (77%) of residents think that climate change will be at least a somewhat serious problem for Massachusetts if nothing is done to mitigate it (Figure 1). That number is similar to what we found in 2019 (79%), but there has been a decline in intensity. Just under half (48%) consider climate a "very serious" problem, compared to 53% in 2019.

There are notable differences on this question across several demographics (Figure 2), but the clearest divide is by political identification. This series of surveys, along with national surveys, have shown that climate has long been a polarizing issue, with vast differences between views among Democrats and Republicans. In this poll, 62% of Democrats and Democratic-leaning independents think climate is a very serious problem for the state, compared to just 22% of Republicans and Republican-leaning independents. A quarter of Republicans felt climate change was not at all serious (17%) or not happening at all (9%). Among the remaining independents who did not lean towards either party, 48% saw climate as a very serious problem, identical to the percentage of residents overall.

As large as this partisan gap is, it is actually smaller than in the 2019 survey, when 72% of Democrats thought climate was very serious, compared to 23%

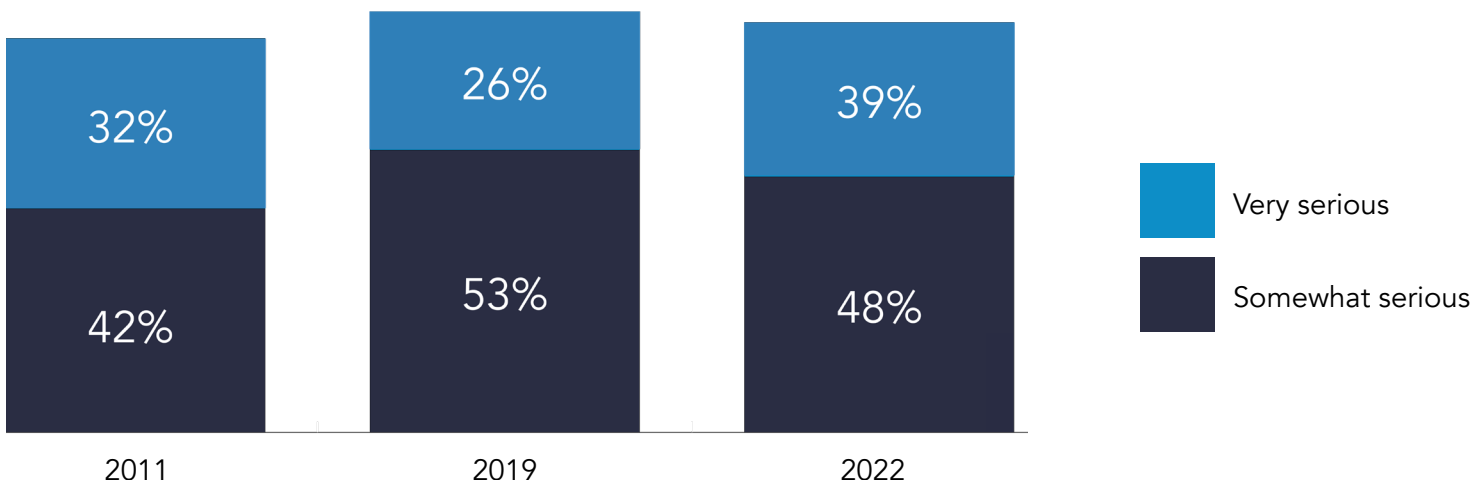
of Republicans and 40% of Independents. Seriousness has declined among Democrats over the past 3 years, held steady with Republicans, and increased with Independents. But because Democrats and Democratic leaners comprise such a large share of all residents (52% in 2019, 50% here), that 10-point drop among Democrats is a major reason why the overall "very serious" percentage has declined.

Consistent with national polling, Black (57%) and Latino (60%) residents are more likely to see climate as a very serious problem than white (46%) and Asian (45%) residents. There is also a gender gap on climate. Overall, 54% of women see climate as a very serious problem, compared to just 42% of men. This difference persists across parties and races. Democratic women (68%), Black women (60%), and Latinas (67%) are the subgroups most likely to view climate as a "very serious" problem.

There are also regional differences. Boston residents are much more likely to see climate change as a very serious problem (61%), followed by the cities and suburbs closest to Boston (52%) and the Southeast region (50%), which includes most of Plymouth, Bristol counties, Cape Cod and the Islands. Less than half of residents saw climate as a very serious problem in the outer suburbs (between Route 128 and 495; 44%), in Central (43%), and in Western Massachusetts (45%). The fact that seriousness is higher in Boston is consistent with the political and racial demographics of the city compared to the rest of the state. Over half (51%) of Boston residents in this survey initially identify as Democrats. The figure rises to 65% when including Independents who lean Democratic. Both these figures are much higher than the state average (34%, 50%). Democratic political identification is also higher in the inner suburbs (41% Democratic, 61% Democratic with leaners). Boston is

Figure 1: Fewer residents see climate as a "very serious" problem compared to 2019.

% of residents in each year's poll that considered climate a very or somewhat serious problem for the state if left unchecked



Q: If nothing is done to reduce climate change in the future, how serious of a problem do you think it will be for Massachusetts?

also notably more diverse; 56% of Boston residents in this survey self-identify as white, compared to 73% or more in the other regions of the state. One-third of Boston residents surveyed self-identified as primarily Black (20%) or Latino (14%). The fact that Democrats and Black and Latino residents are all more likely to consider climate a very serious problem helps explain why Boston residents profess an elevated seriousness.

But politics and demographics do not explain why the Southeast region also views climate as a serious problem. This region is often one of the most conservative in the state, both in statewide polls and in election results. In this survey, it has the second highest share of Republicans (16%), after Central Massachusetts, and the lowest percentage of Democrats (26%). It's also 78% white and only 2% Black. It may be that this region's coastal exposure makes it more attuned to some of the potential impacts of climate change. Indeed, 37% of Southeast residents think climate change is already causing sea level rise in Massachusetts, second only to the Boston region (39%).

There are also socio-economic differences, but educational attainment and income pull in different directions. Residents with advanced degrees are more inclined to see climate change as a very serious problem (57%) than those with lower levels of education (46%). Those with the highest levels of

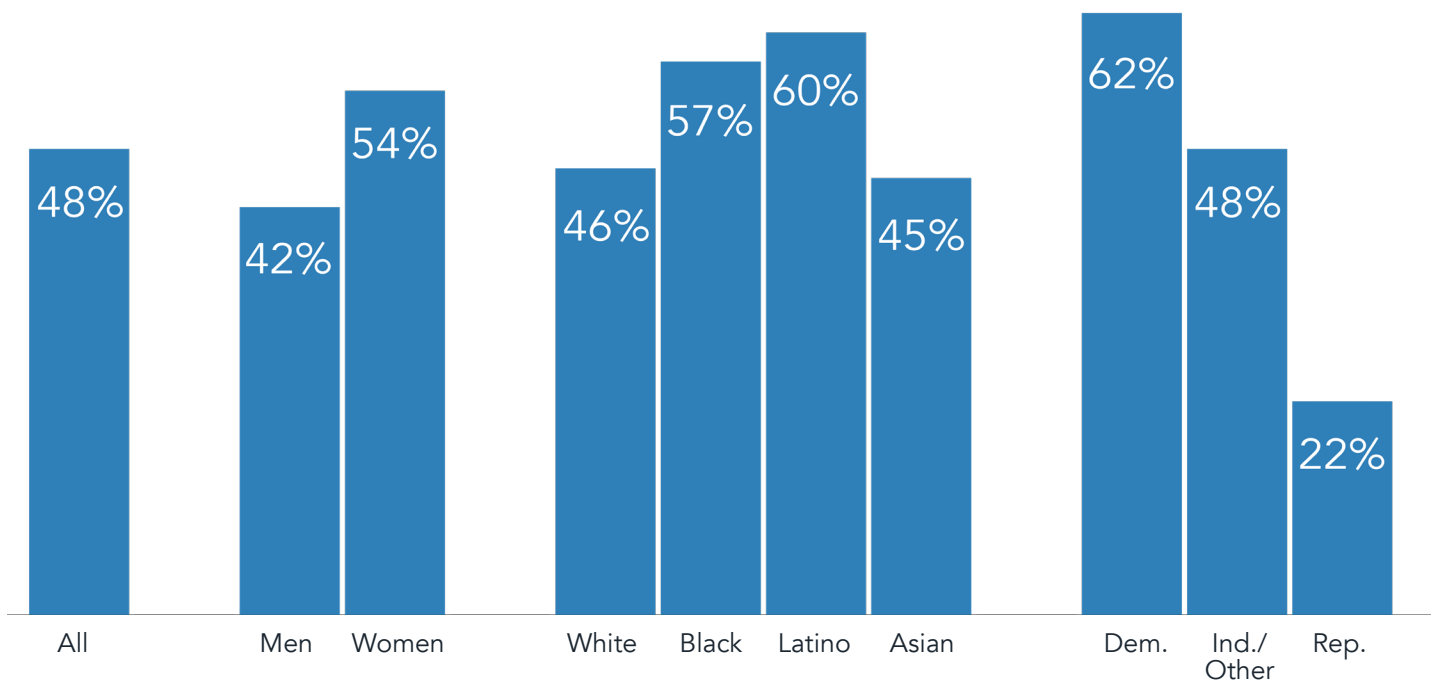
education have tended to hold more liberal views on a range of political issues in recent years. At the same time, residents making less than \$50,000 a year (53%) are more convinced of the seriousness of climate change than those making more money. Black and Latino residents are more likely to fall into this income category; 40% or more of each group makes \$50,000 or less, compared to 30% of white residents and only 14% of Asians.

Just under half of residents view climate as a high priority for state government.

Another indication of residents' slight decline in concern about climate is that the share of residents who consider climate a "high priority" for state government has declined since 2019, from 54% to 47% (Figure 3). This decline pushed climate change down to the least-prioritized issue of the six tested in this survey. The top issues, health care and education, showed little change from 2019. Jobs and the economy and energy and fuel costs have risen in priority since 2019. [Other Massachusetts polls](#) this year have also shown economic issues weighing more on residents and voters, driven largely by the cost of living and inflation. Energy costs are a major component of that upward price pressure and were subject to much media coverage in the wake of Russia's invasion of Ukraine, which was well underway during the fielding period for this survey.

Figure 2: Women, Black and Latino residents, and Democrats most like to think climate change "very serious".

% of residents in each year's poll that considered climate a very or somewhat serious problem for the state if left unchecked



Q: If nothing is done to reduce climate change in the future, how serious of a problem do you think it will be for Massachusetts?

It is tempting to chalk up the rising concerns about the economy and energy costs to current events and media coverage. There is evidence in national polls that Americans are not very well informed about actual increases in jobs and GDP over the past year. [One survey showed](#) that as many Americans thought the country had lost jobs in 2021 as thought it had gained jobs. Economic indicators have been scrambled in 2022, with inflation concerns up and now possibly declining, and with strong jobs numbers while economic output figure point towards a coming recession. One thing is certain: residents are hearing a lot about the state of the economy, and it has risen to the top of their priorities.

Real, perceived, or both, a souring economy may make progress on climate goals harder, particularly if climate solutions could drive up costs at a time of rising prices overall. Those working on climate issues will need to put some thought into how to take climate action in a worsening economy and how to frame it as responsive to economic concerns.

As on the seriousness of the climate threat, there are demographic differences on issue priority. Women are more likely to see climate as a high priority than men (51% versus 43%). Black (51%) and Latino (50%) residents are slightly more likely to prioritize it than white (47%) and Asian residents (46%), but they are also more likely to prioritize the economy, education, and health care. [Other surveys conducted](#) during the pandemic have shown that non-white respondents rate more policies as high priorities.

The biggest demographic difference, once again, is by party. Nearly two-thirds (65%) of Democrats and Democratic-leaning independents think climate

should be a high priority for the state, making it a top issue with this group, behind education and health care and tied with jobs and the economy. Democrats are also less likely to prioritize taxes (42%) and fuel and energy costs (61%) than residents overall.

Republicans and Republican-leaning are a mirror image. Only 19% say climate should be a high priority, making it their lowest-priority issue by a whopping 44 points. Republicans and leaners also place a higher priority on taxes (63%), energy costs (71%), and jobs and the economy (76%). [Polarization of economic issues](#), with the party in power having more positive views and the out-party having more negative views, is a well-documented phenomenon. This polarization may be contributing to Republicans' elevated economic priorities in this survey. The remaining independents fall between the two-party extremes, but they prioritize taxes more than average (57%) and climate slightly less (42%). It is a truism that residents often support policies but not the taxes to pay for them, but this prioritization among independents is another sign of the headwinds facing climate action.

Compared to 2019, fewer Democrats and Republicans think climate should be a higher priority for the state. In 2019, half of the sample was asked about climate change and the other half about global warming. There was a small difference among Democrats between those two phrases (73% for climate change and 69% for global warming), but both were rated higher than in the 2022 survey. Priority among Republicans and Republican leaners was 26% or 25%, respectively – essentially the same for either term, but 6-7 points above where it is now.

Figure 3: Climate change has risen as a priority since 2011, but still lags behind other issues.

% of residents who consider each issue a "high priority" for state government

	2022	2019	2014	2011
Health Care	73%	71%	77%	71%
Education	70%	70%	83%	83%
Jobs and the economy	68%	61%	83%	89%
Energy and fuel costs	64%	47%		57%
Taxes	51%	48%	49%	49%
Climate Change	47%	54%	41%	32%

Q: I'd like to ask you about long-term issues the Massachusetts state government could focus on. As I read from the list, please tell me if you think each should be a high priority, a medium priority, or a low priority for the state government over the long term. ...

Note: Climate change was asked as global warming in 2011, 2014, and to half of respondents in 2019; "Energy and fuel costs was not asked in 2014 and was asked as "Energy" in 2019.

Majorities think climate impacts are imminent or already here.

Public perception of the seriousness and priority of climate change has declined slightly at a time when climate scientists are telling us there is no time to spare to head off the worst of climate impacts in the future. The vast majority of residents think some of those impacts are either already happening or at least somewhat likely to in the next five years. About a third of residents think that each of the climate impacts are already happening in Massachusetts (Figure 4). This ranges from 36% who think more powerful storms are here to 26% who think we have already experienced inland flooding from climate-related rain events. Another 25-29% think these impacts are “very likely” in the next 5 years. A quarter or less think each of these impacts are not likely or are unsure.

As with the seriousness question, the share who think that climate change is not likely to have an impact or who are unsure is a distinct minority. Even so, one might expect even more residents to say that climate impacts are already being felt, given what climate scientists and meteorologists are communicating about the issue. Among those who think climate

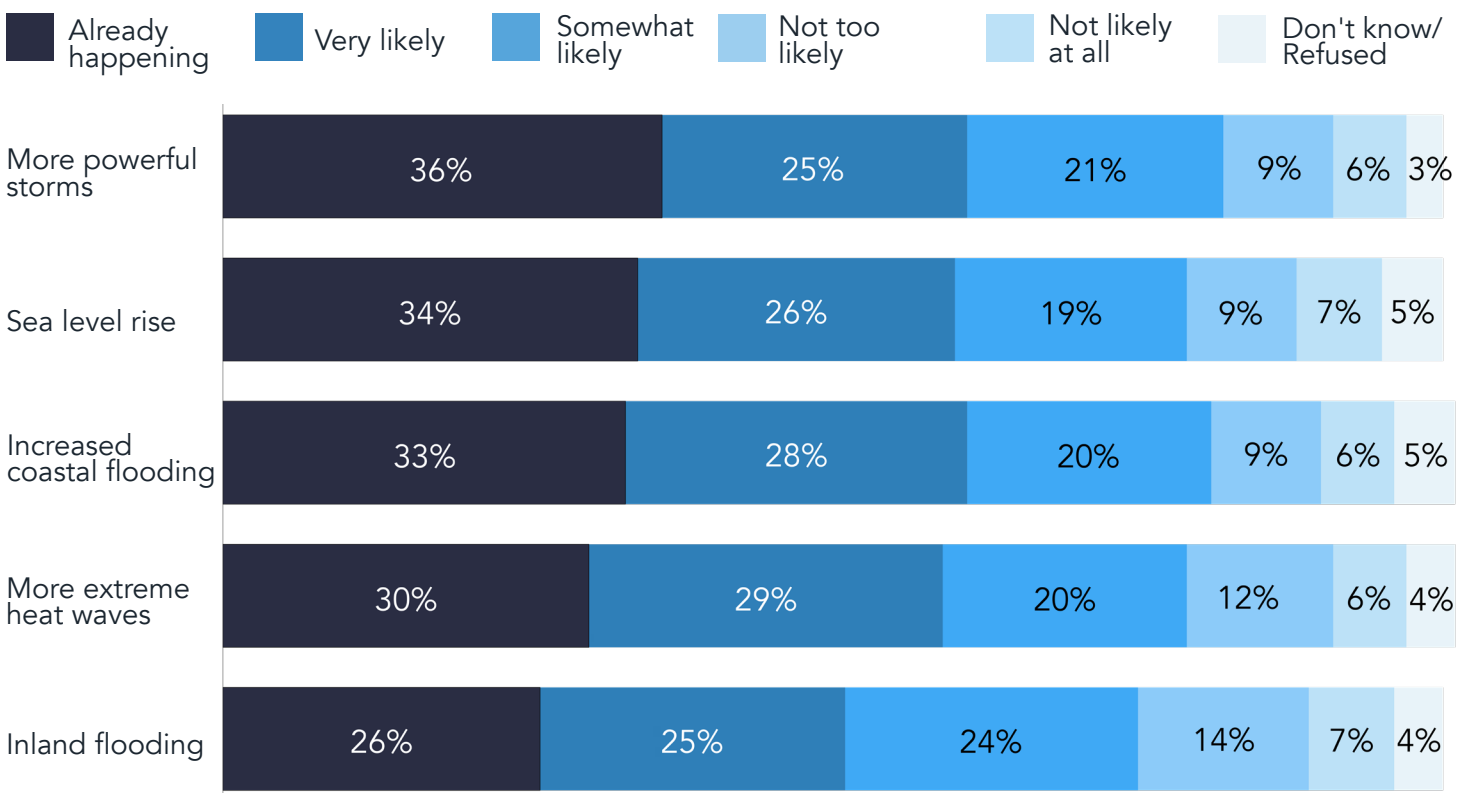
change poses a “very serious” challenge to the state, 39% and 55% think these climate impacts are already happening.

Many of the climate impacts tested, like sea level rise and coastal flooding, will affect some regions of the state more than others. There are some differences on these questions by geography, but they are perhaps smaller than might be expected. Boston residents are among the most convinced that all of the climate impacts tested are already happening. That may be driven more by the fact that, as mentioned earlier, Boston residents are more diverse, more liberal politically, and more likely to place seriousness and priority on climate than other regions, than by the fact that Boston is under threat from rising seas. Similarly, Western Massachusetts residents are just as convinced that climate impacts are already being felt, even coastal impacts that would not affect them directly. Western Massachusetts is one of the most politically liberal parts of the state, so ideology may be having more of an effect here than direct experience.

Women are more likely than men to think climate impacts are already happening or are very likely in the next five years. The familiar partisan gap remains – three-quarters of Democrats think some

Figure 4: Majorities think Massachusetts climate impacts are already happening or "very likely".

% who think each climate impact is already happening or _____ likely in the next 5 years.



Q: Which of the following impacts do you think climate change is already having here in Massachusetts? First, READ FIRST. PROBE IF NOT ALREADY HAPPENING: How likely do you think READ ITEM is to happen in the next 5 years due to climate change? Very likely, somewhat likely, not too likely, or not at all likely? How about READ NEXT.

climate impacts are very likely or already happening, compared to about a third of Republicans. But there is not much of a difference by income, or by race. White residents, who were less likely to prioritize climate as an issue or think it is a very serious problem, are just as likely to foresee these impacts as non-white residents. This is another sign that the relationship between believing in climate impacts and thinking it is serious and a priority is perhaps weaker than might be expected.

Residents with lower levels of education are less likely to think climate impacts are already happening. Belief rises with education, with those holding advanced degrees most convinced. Only 30% of those with a high school diploma or less education think climate change is already causing more powerful storms in Massachusetts; 36% of those with some college short of a bachelor's degree and 38% of those with a BA think so; and 47% of those with a degree beyond a Bachelor's.

Residents report an emotional toll from climate change.

New in this version of the climate poll, we asked residents what emotions they felt when they thought about climate change (Figure 5). About half of the responses involved a negative emotion beyond simply being “concerned” about climate change, including feeling anxious, nervous, or worried (18%); sad, disappointed, or defeated (14%); feeling fear, stress, or a sense of doom (13%); or feeling angry, frustrated, or guilty (8%). Another 5% said they were concerned or alarmed, while 13% felt that climate change was serious or urgent and demanded action. And 3% said they felt helpless or that it was too late to stop climate change. Only 8% of residents thought that climate change was fake or a hoax, or thought the threat was being overblown, while 9% expressed apathy or indifference.

These emotional reactions break down along some

Figure 5: Democrats and Independents are more anxious, fearful, and sad about climate change than Republicans.

% of residents overall and my party ID (with leaners), whose open-ended comment was coded into each category

	Overall	Dem.	Rep.	Ind./Other
Anxious; nervous; worried	18%	23%	9%	19%
Sad; disappointed; defeated	14%	17%	6%	16%
Serious; urgent; happening; needs action	13%	16%	10%	11%
Fear; stress; doom	13%	19%	5%	9%
Apathetic; indifferent; unconcerned	9%	4%	21%	8%
Fake; hoax; skeptical; exaggerated; overblown; natural	8%	1%	20%	6%
Angry; frustrated; guilty	8%	8%	8%	6%
Unsure; ambivalent; confused	6%	3%	8%	8%
Concerned; alarmed	5%	6%	4%	4%
Hopeful; good; positive; hopeful	4%	5%	3%	4%
Bad; negative	3%	4%	3%	2%
Helpless; inevitable; too late	3%	3%	2%	4%
Other	3%	2%	4%	4%
No comment; N / A	2%	1%	3%	3%

Q: In a word or two, what emotions do you feel when you think about climate change?

of the same demographic lines as seen on other climate concern questions in the survey, most notably gender and party. Women are more likely than men to feel anxiety (21% versus 15%) or fear (17% versus 8%), while men were more likely to express apathy or indifference (12% versus 7%). Democrats and Democratic leaners were slightly more likely to express fear, sadness, and worry, while a fifth of Republicans expressed indifference or skepticism, calling climate change a hoax or overblown. A quarter of Democratic women are feeling anxiety (26%) or fear (24%) about climate change, compared to 19% and 12%, respectively, among Democratic men.

These figures are a reminder that the psychological toll of climate change is not universal. For some, the issue evokes feelings of existential dread, but for a smaller group, it is barely registering.

There is room to grow personal actions that could help mitigate climate change.

Most Massachusetts residents (77%) believe climate

change is happening and poses at least a somewhat serious problem for the state if left unchecked. Majorities think the state is either already feeling some effects of climate change or likely will in the near future. Many are reporting fear, anxiety, sadness, and anger over climate change. So, what are residents doing about it?

Out of a list of eight climate-friendly behaviors, a majority of residents reported doing only two: adjusting their thermostats to save energy (62%) and recycling (79%). Just under half said they avoided single-use plastic products (48%) or bought locally made products (45%). About a third or less engaged in the remaining activities: voting based on climate (34%), eating less meat (32%), avoiding investing in companies that contribute to carbon emissions (28%), and composting food scraps (28%). About half of residents (49%) report doing four or more of these activities, 45% say they are doing one, two or three of them, and 7% are doing none, are unsure, or refused to say.

Figure 6: There is a relationship between individual action and how serious a problem residents think climate change will be.

% doing each action, overall and by seriousness of climate to Massachusetts

	Overall	Very	Somewhat	Not Too	Not at all/ not happening
Recycle	79%	85%	80%	67%	60%
Adjust your thermostat to save energy	62%	68%	63%	51%	37%
Avoid single-use plastic products	48%	58%	49%	34%	17%
Buy locally made products	45%	53%	44%	31%	32%
Vote based on your climate priorities	34%	50%	27%	8%	6%
Eat less meat	32%	42%	31%	15%	8%
Compost your food scraps	28%	35%	24%	19%	19%
Avoid investing in companies that contribute to carbon emissions	28%	40%	23%	12%	7%
None of these	4%	1%	2%	8%	26%
Unsure	1%	0%	0%	1%	1%
Prefer not to say	2%	1%	1%	3%	2%

Q: Thinking about some of the ways that individuals can reduce their impact on the climate, which of the following do you already do?
SELECT ALL THAT APPLY

There is a relationship between the perceived seriousness of climate change and what actions residents are taking, both in the percentage of residents doing each individual behavior and in the total number of actions residents are taking (Figure 6). Nearly half (46%) of those who call climate a “very serious” problem are doing 5 or more actions, while a similar share (48%) of those who think it’s not a problem at all or that it is not happening at all are doing only one action or nothing at all. This relationship has been weaker or non-existent in past years, so this link between action and opinion is new.

While there is a clear relationship between these activities and climate seriousness, it’s not airtight. There is room for more action, even among the most concerned residents, only half of whom are voting based on their climate priorities. And while the numbers are lower among those least concerned about climate, they are not nil: 60% of them are recycling and 32% are buying locally made products. This is a reminder that there are non-climate related reasons that residents pursue these activities. They might adjust their thermostat to save money rather than save the planet, or eat less meat for health, cultural, or ethical reasons, or buy local to support local businesses rather than to eschew emissions from the global supply chain.

Personal behavior can also be shaped by policy and culture. Recycling, the most common of these actions, is now a deeply ingrained behavior. Many communities have curbside pickup and encourage residents to separate their recyclables. Composting is less established as a practice, but local programs modeled after recycling could go a long way toward making it more mainstream. The same could be done for avoiding single-use plastics, and we have seen some businesses and local communities take steps away from plastics in recent years.

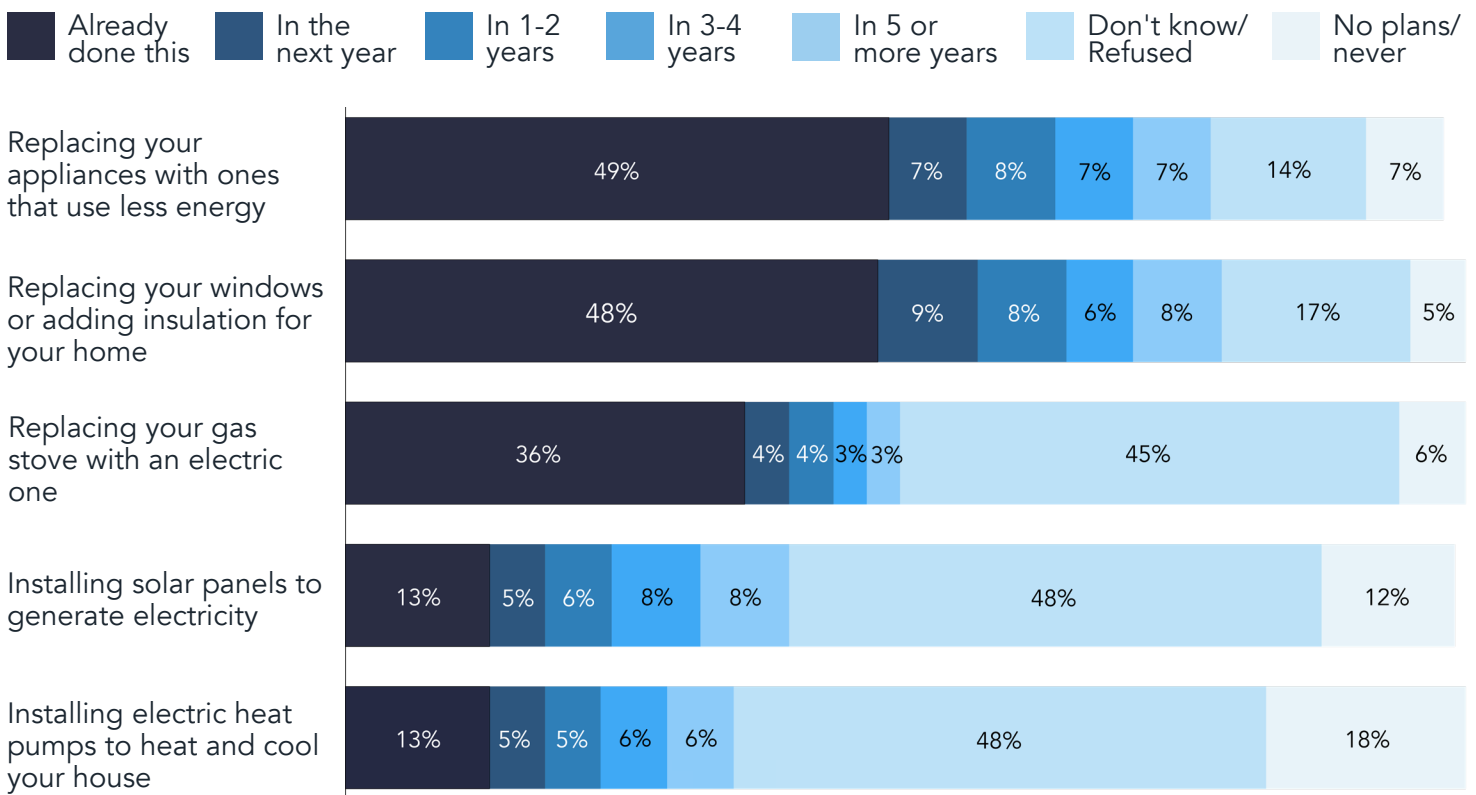
There is a role for the private and public sector to nudge residents towards climate-friendly behaviors by offering products, policies, and programs that encourage or normalize certain actions. Framing these policies broadly and not just as focused on reducing carbon emissions could help to encourage uptake as well.

Homeowners need a nudge towards decarbonization.

The personal behaviors tested may involve lifestyle changes, but they all have a relatively low barrier to entry. Switching one’s home over to renewable energy sources is a much bigger lift. There is a long way to go to decarbonize the state’s residential building stock. Three-quarters of residents report that their home is

Figure 7: Homeowners have taken some steps towards conservation, but few have or are planning solar panels or heat pumps.

% of homeowners who have done / plan to do each home improvement



Asked of homeowners: How soon might you plan to make each of the following improvements to your home?

heated by oil (26%) or natural gas (49%). Among homeowners, who have the most control over how their homes are heated and cooled, the numbers for fossil heat are even higher: 34% use oil and 54% use natural gas.

Unfortunately, homeowners do not report much urgency in terms of changing course, either in terms of installing solar panels or heat pumps to heat and cool their homes (Figure 7). A small number of homeowners (13% each) have already made these home improvements, while 21% say they plan to install a heat pump, and 27% plan to install solar. But nearly half (48% each) say they have no plans to install either, and a sizable percentage are unsure (12% for solar, 18% for heat pumps). Higher-income homeowners are only slightly more likely to say they already have these technologies at home, and they are no more likely to have plans to get them.

Economics are important in future decisions about home energy. When asked if they would move up their schedule for these improvements if they received a rebate or incentive from the state, 60% of homeowners said yes (Figure 8). Nearly as many said a tax break would have a similar effect (54%). Less popular was a requirement that homes meet a

certain energy standard before they could be sold or rented. Only 35% of homeowners said that would entice them to make improvements sooner. Of course, such a mandate, if enforced, would likely have high compliance, but homeowners may be expressing their disapproval towards this approach through their answers to this question.

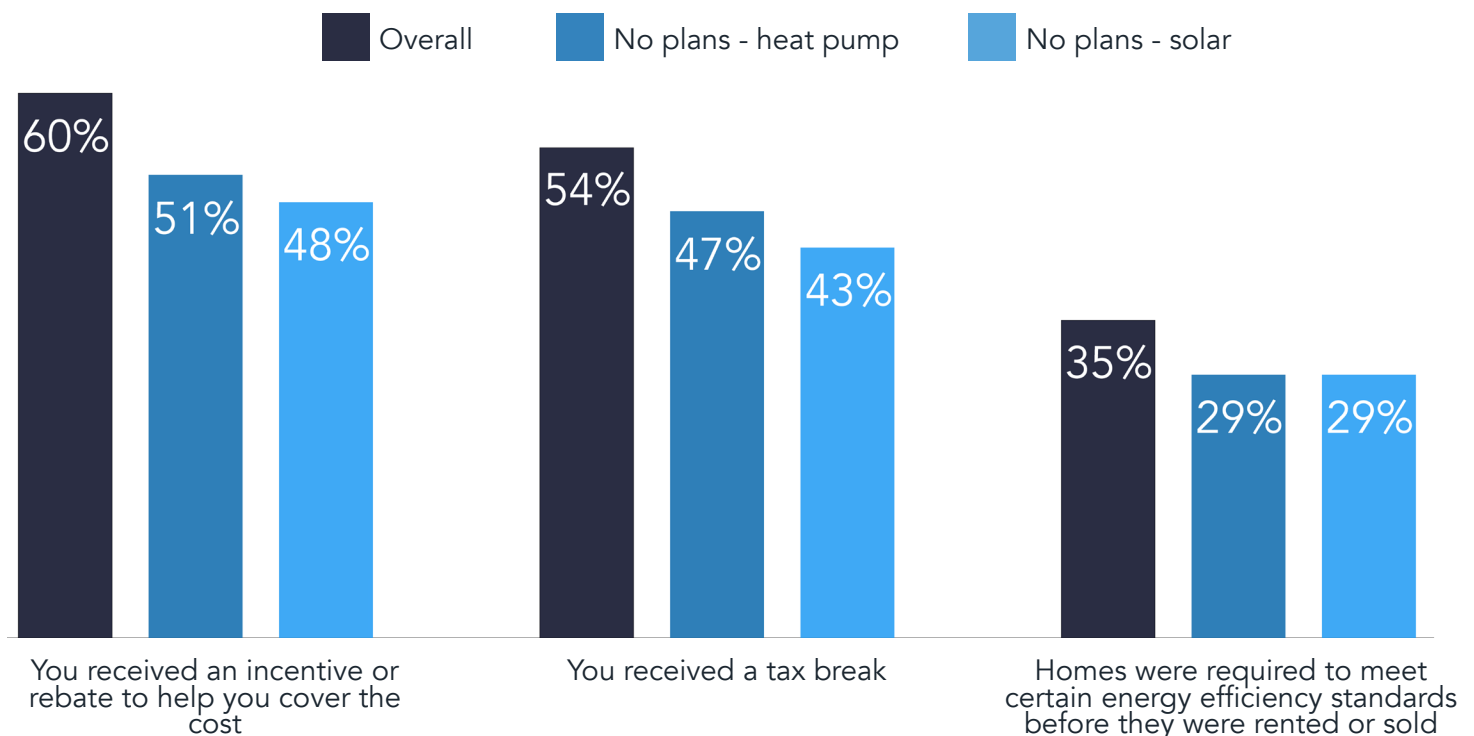
Higher-income homeowners (households making \$100,000 or more) are more receptive to both an incentive or rebate (65%) or a tax break (61%). Homeowners with no plans to install a heat pump and solar are less receptive than those who are considering changes in the next 3-4 years, but more of these holdouts say incentives and tax breaks would make a difference than not.

Support for regulatory changes aimed at new and renovated buildings.

Massachusetts has many old homes. In fact, the [National Association of Home Builders](#) analyzed American Community Survey data and found that the median age of an owner-occupied home in Massachusetts was 56 years, the second oldest in the nation. There are myriad challenges to converting older homes to new heating and cooler systems.

Figure 8: Incentives, rebates and tax breaks would prompt some homeowners to move up their schedules for home improvements.

% of homeowners with overall and with no plans to install heat pumps / solar who say each condition would get them to move up their schedule



Asked of those who responded "3-4 years" or longer, have no plans, or are unsure to any home improvement: Would you move up your schedule for making these kinds of improvements if READ FIRST, or would it not make a difference? How about if READ NEXT?

New construction presents an opportunity to build structures that are green from the start. Majorities of residents agree, supporting several measures that would make new construction and major renovations more renewable and resilient (Figure 9).

Most popular of all was updating the state’s building code to require buildings to be more resilient to the impacts of climate change by strengthening doors, windows and roofs, protecting lower floors from flooding, or even elevating buildings in low-lying areas. Three-quarters (76%) of residents supported changing the building code to account for climate risks, including 40% who strongly support the idea. Mandates around how buildings are powered were also popular: 70% support requiring new or renovated buildings to be ready to charge electric vehicles, and 67% support requiring new or renovated buildings to use only renewable energy, either from solar on-site or from renewable sources on the grid. Slightly less popular, although still supported by a majority, was requiring new or renovated buildings to be fully electric, using no oil or natural gas (57%).

These ideas are most popular with the groups most convinced climate change is a very serious problem: women, Democrats, Black and Latino residents, and

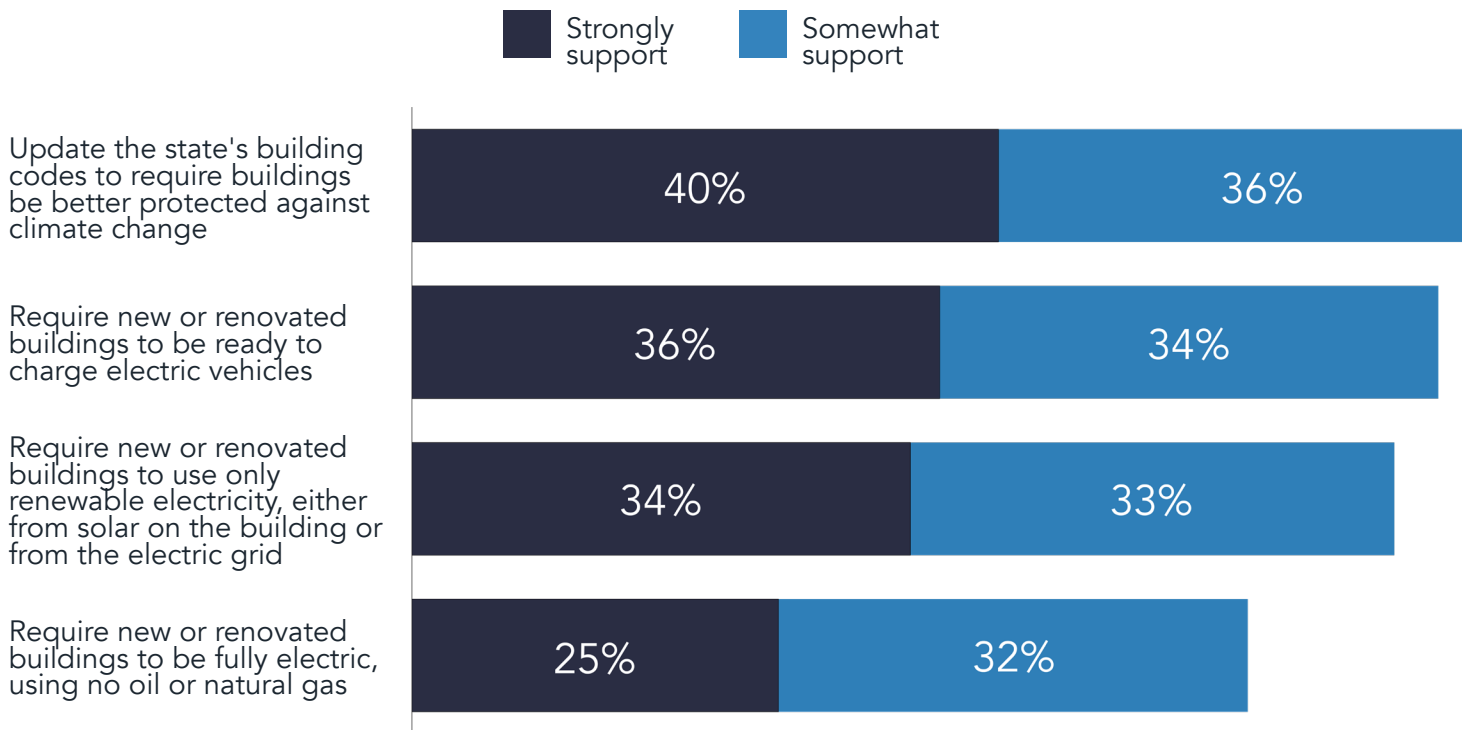
residents holding advanced degrees. There is also a clear relationship between support for these ideas and how seriously residents think climate change will effect the state. For example, 85% of those who think climate will be a very serious problem for the state support EV-charging requirements, compared to just 25% among those who think climate is not at all serious or not happening.

Support for these changes declines somewhat as household income rises. This may be related to the fact that homeowners are less supportive than renters. Homeowners may be worried that these policies would make buying a new home or renovating their current home more expensive. It may also have to do with the demographics of these two groups, as renters tend to be younger, lower-income, and more non-white, and those groups tend to be more convinced of the seriousness of climate change.

Support for these policies tends to be highest in Boston and its inner suburbs. Fully 89% of Boston residents support a more resilient building code, reflecting perhaps a combination of the city’s diverse and liberal demographics and its direct experience on the frontline of sea level rise and coastal flooding.

Figure 9: Majorities support policies to make buildings greener and more resilient to climate change.

% of residents who strongly or somewhat support each policy



See topline for full question wordings.

Further insights into home energy decisions.

In 2020, MPG conducted [research into consumer decisions](#) about home energy, including a survey of residents and a pair of focus groups with homeowners who heat their homes with oil. The research was funded by the Barr Foundation and done in collaboration with the state Department of Energy and Environmental Affairs, to inform their work on a NetZero policy for the Commonwealth.

The 2020 survey sheds some light on the obstacles to solar and heat pump adoption found in this survey. A majority of homeowners in the 2020 survey who did not already have solar were at least somewhat interested in installing solar panels on their homes (61%). And 53% said a financial incentive to help with installation costs would make them more interested, including 20% of those who had previously not been open to the idea.

The chief obstacle to overcome is that most homeowners are happy with their current heating arrangement and are not actively shopping for alternatives. A plurality of natural gas (49%) and home heating oil (41%) customers were happy to stay with their current fuel, although solar was the second choice among both these groups. Homeowners in the focus groups were well-informed about the cost and operations of their

oil heat systems, but they were less informed about alternatives that might be available. For them, cost and the lack of other available options in their region were more important than environmental concerns, which were seen as too large to be solved by their individual home heating decisions.

Heat pumps were particularly unknown at the time, with some in the focus groups differing over how efficient they were heating homes in low temperatures. Community solar – a concept where multiple houses share electricity from a field of panels cited elsewhere in town – was largely unheard of. A discussion of citing solar panels other than on rooftops prompted concerns about cutting down forested areas.

Two years later, heat pumps are still a relatively new technology, and there is much that homeowners need to learn about them. It may take a concerted marketing campaign, by the state or private installers or both, to convince residents that they are up to the rigors of a New England winter. All told, this new survey, and the 2020 poll and focus groups, suggest homeowners will need a major push towards adopting solar or heat pumps if the state hopes to meet its climate goals.

Drivers are split on whether an electric vehicle is in their future.

Much of the policy conversation about transportation and climate, at both the state and federal level, has focused on subsidizing electric vehicles (EVs) and building out EV charging infrastructure. From a political perspective, this strategy seems like a path of least resistance: Drivers get to keep driving, just in cleaner vehicles. It is more difficult to ask residents to change their driving habits, especially in exurban and rural parts of the state that lack viable alternatives. But this research suggests that a more comprehensive approach to reducing emissions from transportation may be more successful.

Consistent with most statewide surveys, driving is the dominant mode among most Massachusetts residents. Two-thirds (66%) of residents report they drive alone regularly, and 46% drive with others.¹ The next most common mode is walking (45%). Public

transit use is much lower; 15% each report riding the subway or public bus. Use of both these modes is highly concentrated within Route 128, where 38% take the subway and 27% take the bus. Among those who ride some form of public transit, nearly half also drive alone (49%) and/or with others (48%). Majorities of walkers and cyclists also drive. Even in Boston, consistently rated one of the most walkable cities in America and where MBTA service is most prevalent, 54% of residents report driving alone.

Among drivers, 84% are mostly driving a conventional, gas-powered vehicle; only 6% report having a hybrid, and 3% say they drive an electric car. Most of these non-EV drivers are split as to whether their next car will be electric: 44% say it's at least somewhat likely, and 38% say it's not too likely or not likely at all. The rest say they are not planning to buy another car (12%) or are unsure (6%). There is a clear age split on this question, with a majority of residents under age 45 saying they're likely to buy an EV, compared to

¹ Residents could select multiple transportation modes, so the percentage exceeds 100%.

less than 40% among older residents. That is in part because older residents, particularly those over 60, were much more likely to say they were not planning to buy another car (19%) than younger residents.

Men under 45 were particularly interested in EVs (60%). Given that men see climate as less serious and less of a priority than women, some of this interest in EVs may be driven by factors other than climate, like saving money on gas or an interest in the technology or performance of EVs. There are also divides by race, although they are different than we have seen on other questions. About 30% of Latino and Asian drivers say they are very likely to get an EV for their next car, compared to about half that share of white (15%) and Black drivers (16%).

Interest in EVs also increases with education, with 53% of those with an advanced degree saying they're likely to get an EV. A quarter (26%) of those making \$150,000 or more said they were "very likely" to get an EV, higher than overall (18%). One concern that has been voiced about EV rebates is that, unless income is taken into account, they will end up being used by those wealthy enough to consider an EV in the first place. This data point suggests those concerns may be well founded.

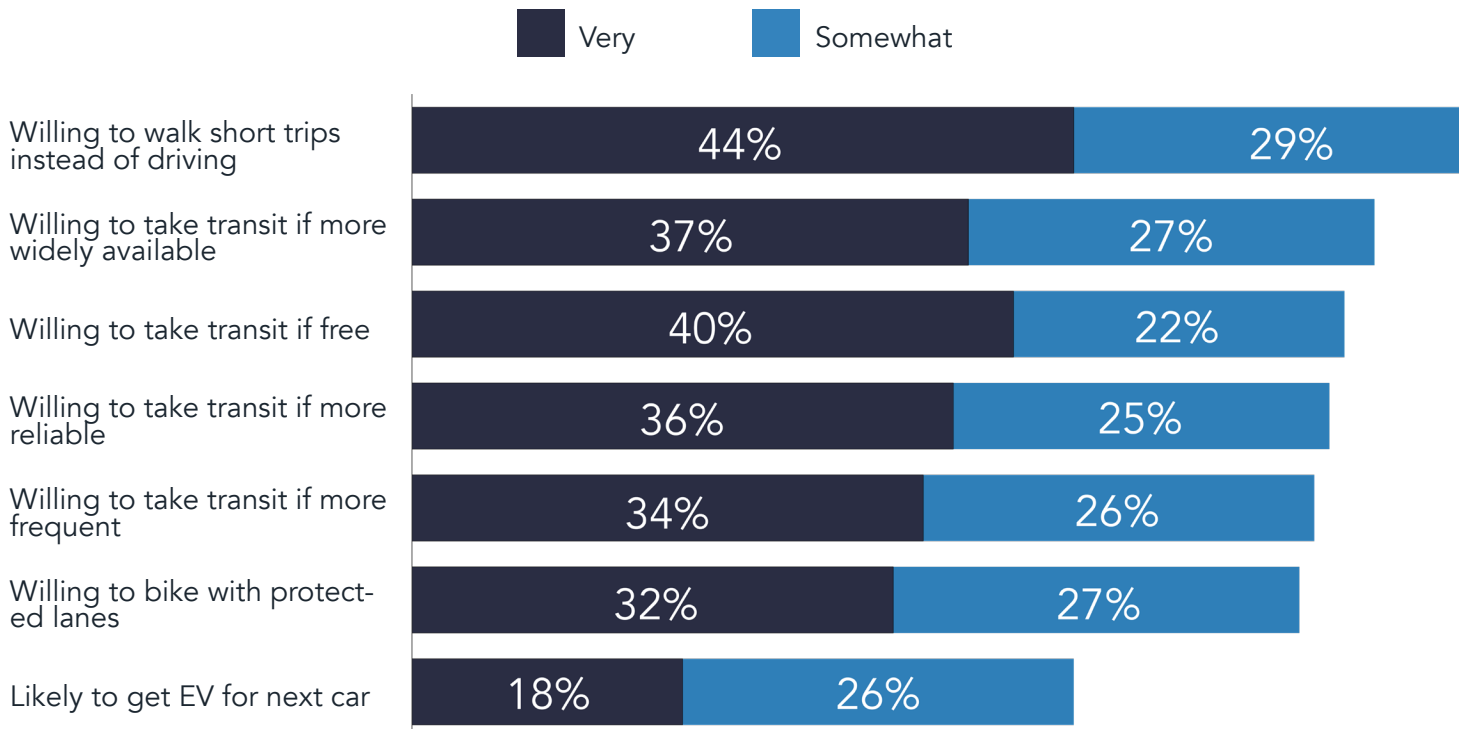
Residents signal willingness to leave car behind for some trips.

All these concerns from the 2020 research, combined with the new question on EV adoption, highlight the limits of a decarbonization strategy focused mostly or exclusively on EVs. On the other hand, this new survey found that residents are willing to consider alternatives to driving for at least some trips, assuming some improvements to other modes of travel (Figure 10). Nearly three-quarters of residents said they would be willing to walk for local trips of a mile or less, instead of driving. Inside Route 128, where development tends to be denser, 81% would be willing to walk, including 59% who would be very willing to do so.

A majority (59%) also said they would be willing to ride a bike for short local trips, provided that there were protected lanes or paths along the route. But 27% were unwilling to ride, and 12% said they were unable to ride a bike, including 23% of those aged 60 or older. Consistent with much research about cycling, younger residents were more willing to ride than older ones, and men were more willing than women, even with the caveat about safe biking infrastructure along the route. Residents in Boston and its inner suburbs were more willing to bike than

Figure 10: Residents are more willing to walk, bike, and take transit than to buy an EV for their next car.

% of residents very or somewhat willing / likely to take each action



See topline for full question wordings. Electric vehicle questions asked of drivers who do not already own an EV.

those living farther out. Bike infrastructure is more prevalent in these communities, with many cities and towns adding protected lanes during the pandemic. Encouragingly, 53% of those not riding currently also express at least some willingness to ride.

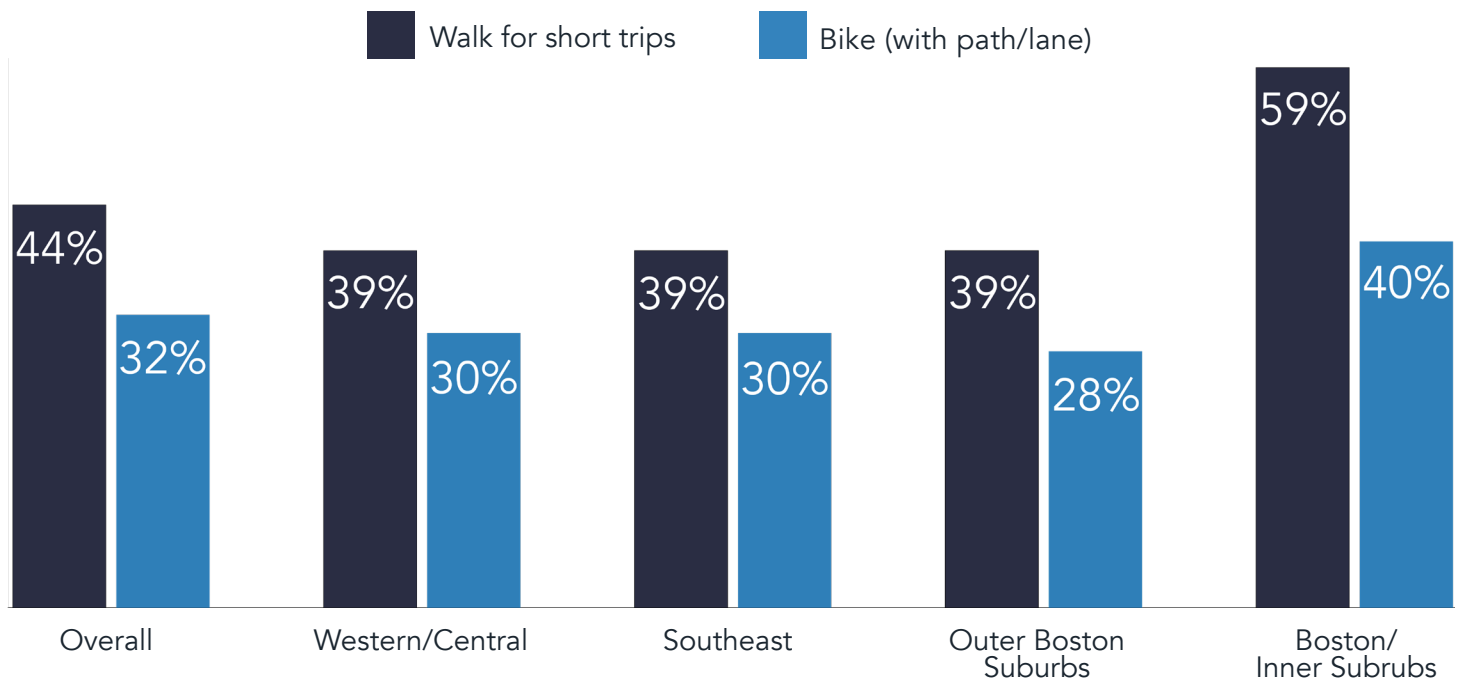
There is also a willingness to take public transit instead of driving for some trips if certain improvements were made. About 60% of residents said they would be willing to do so if transit were more widely available (64%), ran more frequently (60%), and were more reliable (61%). If transit were free to ride, 62% say they would be more willing to use it. Non-white residents were more willing to ride than white residents under all these conditions, and younger

residents were consistently more interested than those over age 45. Willingness increases with proximity to Boston, where public transit is most prevalent, but 50% or more of non-transit riders statewide say they would be willing to ride if improvements were made (Figure 11).

Even if only a fraction of residents follow through on their stated interest in these other modes, it would make a dent in car trips and their emissions. Taken together, these transportation questions point toward an “all of the above” approach to decarbonizing transportation, which continues to be the state’s single largest source of emissions.

Figure 11: Residents closest to Boston are most willing to walk or bike for some trips.

% overall and in each region who are "very willing" to do walk or bike instead of drive



Asked of those who responded “3-4 years” or longer, have no plans, or are unsure to any home improvement: Would you move up your schedule for making these kinds of improvements if READ FIRST, or would it not make a difference? How about if READ NEXT?

Prior research highlights hurdles to EV adoption

This survey did not ask about support for EV rebates, but MPG's [2020 "NetZero" research](#) conducted with the Department of Energy and Environmental Affairs (funded by The Barr Foundation), found majority support for incentives for hybrid and EVs (75%), as well as incentives targeted specifically at high-mileage drivers (73%). Even more supported expanding EV charging infrastructure (79%). Most popular was improving existing public transit (83%), and 76% supported expanding transit to places that currently lack service.

The 2020 research also included a pair of focus groups with high-mileage drivers, a key target for reducing emissions. The groups revealed many concerns about EVs that had nothing to do with cost. Participants still had "range anxiety" about EVs on longer trips. Estimates of how long it takes to charge an EV varied widely. There were

also concerns about how EV batteries perform in winter cold, and about having to plan out longer trips in advance to account for the availability of EV charging stations.

Even if most driving trips are well-within the range of even the lightest-duty EVs, consumers wanted a vehicle capable of their longest and most demanding trip—towing a trailer on a once-a-year multi-state road trip, for example. If an EV is not up to every possible task, consumers tended to view it as a second or ancillary vehicle. Finally, these drivers expressed a preference for purchasing used cars, as well as a general lack of awareness of the availability and amounts of federal and state EV rebates. As with the oil heat homeowners involved in another set of focus groups for this 2020 project, car consumers were not actively keeping up with the details of EVs unless they were actively shopping for a new car.

CONCLUSION: COVID AS A DRY-RUN FOR CLIMATE

Compared to this latest poll, our 2019 survey seems like a high-water mark for concern about climate change in Massachusetts. It was the only poll in this series of four going back to 2011 where a majority of residents saw climate as a "very serious" problem for the state and a "high priority" for state government going forward.

The previous poll was completed late in 2019 and released in February 2020. Less than a month later, the world changed dramatically. The COVID-19 pandemic is one of many current events that has been "drowning out" climate change and possibly contributing to the lower seriousness and priority numbers found in this survey.

There are many interesting parallels between COVID and climate, and our response to the former can give us some insight into our ability to cope with the latter. Both are threats rooted in scientific fact. Both demand a response driven by science. In both cases, success hinges on a combination of top-down policy decisions and changes to personal behavior. Both, perhaps, are subject to some level of fatigue. Over time, even the most conscientious residents can let their guards down, even as case numbers and global temperatures continue to rise.

Despite being based in science, both COVID and climate change have become politicized and polarized. Numerous studies have linked vaccination rates to political party at the county and even the community level. Similarly, this survey is the latest of many that

shows a dramatic divide between Democrats and Republicans in their views on climate. Will political partisanship keep us from doing what the science tells us is necessary? If the past 2 years are prologue, then climate could become another political morass, and needed action could be delayed until it's too late.

Here in Massachusetts, at least, there is hope that we might rise to our portion of the task. Majorities of residents believe the science on both COVID and climate. Apart from being hard-hit early on, Massachusetts has fared better than most other places during the pandemic. Massachusetts has also shown willingness to lead among states on climate – on off-shore wind, and the proposed Transportation and Climate Initiative—although there is much more to do.

The small decline in concern and priority found in this survey does not change the basic fact that Massachusetts is better positioned, in terms of public opinion, than most states to tackle climate change. But that decline does highlight the need for leadership from state and local government. Policymakers and elected officials will need to communicate the stakes and the scope of the challenge, refocus public will on the task, and enact smart policies even if the public is not actively demanding them. If they do so, they are likely to find a receptive public. Massachusetts has taken this approach to weather the pandemic better than most. It will have to do it again with climate change.

The MassINC Polling Group
Barr Foundation Climate Change Survey
 Statewide Survey of 1,890 Massachusetts Residents,
 including oversamples of Black, Latino, and Asian residents
 Field Dates: March 23 - April 5, 2022

I'd like to ask you about long-term issues the Massachusetts state government could focus on. As I read from the list, please tell me if you think each should be a high priority, a medium priority, or a low priority for the state government over the long term. First, should **READ FIRST ITEM** be a high priority, medium priority, or a low priority for the State Government over the long term? What about **READ NEXT ITEM. RANDOMIZE AND REPEAT QUESTION SCALE AND STEM AS NEEDED.**

		High priority	Medium priority	Low priority	Don't Know / Refused
Jobs and the economy	2022	68%	27%	4%	1%
	2019	61%	32%	6%	1%
	2014	83%	12%	4%	1%
	2011	89%	7%	2%	1%
Education	2022	70%	25%	4%	1%
	2019	70%	25%	4%	1%
	2014	83%	13%	3%	1%
	2011	83%	14%	3%	1%
Health Care	2022	73%	21%	5%	1%
	2019	71%	22%	6%	2%
	2014	77%	17%	5%	1%
	2011	71%	22%	6%	1%
Taxes	2022	51%	38%	9%	2%
	2019	48%	37%	11%	3%
	2014	49%	36%	12%	3%
	2011	49%	37%	11%	3%
Climate Change (Global Warming in 2011, 2014 and of half of respondents in 2019)	2022	47%	31%	19%	2%
	2019	54%	26%	18%	3%
	2014	41%	31%	25%	3%
	2011	32%	35%	29%	4%
Energy and fuel costs (Energy in 2019)	2022	64%	28%	6%	1%
	2019	47%	41%	10%	2%
	2011	57%	35%	7%	2%

In a word or two, what emotions do you feel when you think about climate change?

Anxious; nervous; worried	18%
Sad; disappointed; defeated	14%
Serious; urgent; happening; needs action	13%
Fear; stress; doom	13%
Apathetic; indifferent; unconcerned	9%
Fake; hoax; skeptical; exaggerated; overblown; natural	8%
Angry; frustrated; guilty	8%
Unsure; ambivalent; confused	6%
Concerned; alarmed	5%
Hopeful; good; positive; hopeful	4%
Bad; negative	3%
Helpless; inevitable; too late	3%
Other	3%
No comment; N / A	2%

If nothing is done to reduce climate change in the future, how serious of a problem do you think it will be for Massachusetts?

	2011	2019	2022
Very serious	42%	53%	48%
Somewhat serious	32%	26%	29%
Not too serious	12%	9%	11%
Not serious at all	9%	8%	6%
Climate change is not happening	N/A	N/A	3%
Don't Know / Refused	4%	4%	3%

Which of the following impacts do you think climate change is already having here in Massachusetts? First, **READ FIRST. PROBE IF NOT ALREADY HAPPENING:** How likely do you think **READ ITEM** is to happen in the next 5 years due to climate change? Very likely, somewhat likely, not too likely, or not at all likely? How about **READ NEXT. REPEAT STEM AND SCALE ONLY AS NEEDED.**

	Already happening	Very likely	Somewhat likely	Not too likely	Not at all likely	Don't know / Refused
Increased coastal flooding	33%	28%	20%	9%	6%	5%
Sea level rise	34%	26%	19%	9%	7%	5%
More extreme heat waves	30%	29%	20%	12%	6%	4%
More powerful storms	36%	25%	21%	9%	6%	3%
Inland flooding from extreme rain events	26%	25%	24%	14%	7%	4%

Thinking about some of the ways that individuals can reduce their impact on the climate, which of the following do you already do? **SELECT ALL THAT APPLY**

Adjust your thermostat to save energy	62%
Recycle	79%
Compost your food scraps	28%
Eat less meat	32%
Buy locally made products	45%
Avoid single-use plastic products	48%
Vote based on your climate priorities	34%
Avoid investing in companies that contribute to carbon emissions	28%
None of these	4%
Unsure	1%
Prefer not to say	2%

The next questions are about your primary residence.

Do you own or rent your home, or do you have another arrangement like living with family members or student housing?

Own	56%
Rent	33%
Another arrangement	10%
Don't Know / Refused	1%

Which of the following energy sources does your home use for heating, cooking, electricity, or hot water? Please select all that apply.

Heating oil	26%
Natural gas	49%
Propane gas	11%
Electricity from solar panels on your home	8%
Renewable electricity (solar, wind, hydro) from the electric grid	10%
Electricity from the conventional sources in the electric grid	56%
Wood or wood pellets	9%
Something else	1%
Unsure	4%
Prefer not to say	1%

The following asked of homeowners:

How soon might you plan to make each of the following improvements to your home?

	Already done this	In the next year	In 1-2 years	In 3-4 years	In 5 or more years	No plans / Never	Don't Know / Refused
Installing electric heat pumps to heat and cool your house	13%	5%	5%	6%	6%	48%	18%
Installing solar panels to generate electricity	13%	5%	6%	8%	8%	48%	12%
Replacing your windows or adding other insulation for your home	48%	9%	8%	6%	8%	17%	5%
Replacing your appliances with ones that use less energy	49%	7%	8%	7%	7%	14%	7%
Replacing your gas stove with an electric stove	36%	4%	4%	3%	3%	45%	6%

The following asked of those who responded “3-4 years” or longer, have no plans, or are unsure to any of previous questions:

Would you move up your schedule for making these kinds of improvements if READ FIRST, or would it not make a difference? How about if READ NEXT

	Yes, would move up my schedule	Wouldn't make a difference	Don't Know / Refused
You received an incentive or rebate to help you cover the cost	60%	28%	12%
You received a tax break	54%	30%	16%
Homes were required to meet certain energy efficiency standards before they were rented or sold	35%	46%	19%

When it comes to reducing the climate impact of most buildings, the easiest time to do so is during construction or major renovations. Keeping that in mind, how strongly would you support or oppose each of the following policy proposals?

	Strongly support	Somewhat support	Somewhat oppose	Strongly oppose	Don't Know / Refused
Require new or renovated buildings to use only renewable electricity, either from solar on the building or from the electric grid	34%	33%	12%	13%	8%
Require new or renovated buildings to be ready to charge electric vehicles	36%	34%	11%	11%	8%
Require new or renovated buildings to be fully electric, using no oil or natural gas	25%	32%	16%	17%	10%

Massachusetts’ building codes currently do not account for climate change risks like increased flooding, wind, snow, or extreme heat. Proposals to update the building code could include reinforcing doors and windows, protecting lower floors from flooding, elevating buildings, and strengthening roofs. How strongly would you support or oppose updating the state’s building codes to require buildings be better protected against climate change?

Strongly support	40%
Somewhat support	36%
Somewhat oppose	9%
Strongly oppose	8%
Don’t Know / Refused	7%

The next few questions are about how you get around.

Which modes of travel did you use regularly to get around? Please check all that apply.

Drive alone	66%
Drive or ride with others	46%
Take a taxi, Uber, or Lyft	16%
Take the MBTA subway	15%
Take a public bus	15%
Take a corporate or private shuttle	3%
Take a ferry	3%
Take the commuter rail	10%
Ride a bicycle	13%
Walk	45%
Other	1%
Don’t Know / Refused	1%

The following asked of those who drive alone or with others:

Is the car you drive *most often* one that runs on gas only, a gas-electric hybrid, or fully electric? If you drive various cars or do not drive a car, please say so.

Gas only	84%
Hybrid	6%
Electric	3%
Drive various cars	1%
Don’t drive a car	5%
Don’t Know / Refused	<1%

The following asked of those who drive but don't have an EV:

How likely is it that you would lease or buy an electric car for your next car, if you're planning to buy another?

Very likely	18%
Somewhat likely	26%
Not too likely	16%
Not at all likely	21%
Already own an electric car	<1%
Not planning to buy another car	12%
Don't Know / Refused	6%

How willing would you be to walk for local trip of a mile or less, instead of driving?

Very willing	44%
Somewhat willing	29%
Not too willing	10%
Not at all willing	8%
Unable to walk	6%
Don't Know / Refused	2%

How willing would you be to ride a bike for a short local trip if there were protected bike lanes or separated paths connecting you to where you want to go?

Very willing	32%
Somewhat willing	27%
Not too willing	12%
Not at willing	15%
Unable to ride a bike	12%
Don't Know / Refused	3%

How willing would you be to take public transit instead of driving if **READ FIRST?** How about **READ NEXT?**

	Very willing	Somewhat willing	Not too willing	Not at all willing	N/A (not available, not able to)	Don't Know / Refused
Public transit were free	40%	22%	13%	13%	8%	3%
Public transit were more widely available in your area	37%	27%	13%	14%	6%	3%
Public transit ran more frequently	34%	26%	13%	15%	9%	3%
Public transit were more reliable	36%	25%	13%	14%	9%	3%

Demographics

Gender

Man	47%
Woman	52%
All other	1%
Don't Know / Refused	<1%

Age

18 to 29 years	22%
30 to 44 years	24%
45 to 59 years	26%
60 or over	28%
Don't Know / Refused	1%

Party Identification

Democrat	34%
Republican	14%
Independent / some other party	47%
Don't Know / Refused	5%

Education Level

High School or less	33%
Some college, no degree	25%
College graduate (BA/BS)	23%
Advanced degree	17%
Don't Know / Refused	1%

Race

White	74%
Black	7%
Hispanic / Latino	10%
Asian	7%
All other	3%
Don't Know / Refused	1%

About the poll: These results are based on a survey of 1,890 Massachusetts residents. Live telephone interviews and online interviewing were conducted in English and Spanish between March 23 and April 5, 2022. Telephone respondents were reached by both landline and cell phone. Oversamples were conducted to obtain a total at least 250 Black, 250 Latino, and 200 Asian residents. Results within race and ethnicity were weighted by age, gender, and education level. These were then combined and weighted by race, age, gender, education, geography, and party to reflect known and estimated population parameters for the adult population of Massachusetts. The credibility interval for this survey is +/- 2.6 percentage points for the entire sample, including the design effect. This poll was sponsored by The Barr Foundation.