



Boston University Institute for Sustainable Energy



Boston University Initiative on Cities



Innovation Network
for Communities

A Survey of North American City Climate Leaders:

The Prospects for Climate Action in the COVID-19 Era

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This report is the third of three that provides community leaders, inside and outside of local government, with guidance about navigating their climate-action priorities through the gauntlet of challenges created by the COVID-19 pandemic and the ensuing economic crisis. Each report, based a synthesis of peer-reviewed research, expert interviews and surveys, and the analysis of local climate action, address a different topic:

- More Urgency, Not Less: The COVID-19 Pandemic’s Lessons for Local Climate Leadership (published June 2020)
- Climate of Crisis: How Cities Can Use Climate Action to Close the Equity Gap, Drive Economic Recovery, and Improve Public Health (published September 2020)
- A Survey of North American City Climate Leaders: The Prospects for Climate Action in the COVID-19 Era (October 2020)

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Executive Summary

We surveyed twenty-five U.S. and Canadian city climate leaders in July and August 2020 to assess the current priority of city climate action in the context of the COVID-19 pandemic. Our key findings are summarized below.

Climate Action Still a Priority

While climate action is still a priority in the majority of surveyed cities, prospects for climate action depend on the extent of city revenue shortfalls owing to the pandemic. Sixty-five percent of respondents stated that climate action is an equal priority while 35 percent described climate action as a lower priority since the pandemic started. City climate leaders indicated that the importance of supporting climate action plans for municipal operations has stayed the same, but they are less optimistic that these actions will be implemented in the next 18 months. In response to revenue declines and future economic uncertainty, some surveyed cities are establishing new partnerships with industry, non-profits, and foundations for sustained financial support of actions and programs. As cities embark on paths to recovery, they are simultaneously addressing critical health and economic needs that align with federal and state funding and developing new frameworks that support a broad recovery to address these needs.

Equity Takes Center Stage but Lacks a Clear Roadmap

Cities report a renewed focus on questions of equity related to employment, health, and the environment. Affordable, energy efficient housing, restoring public transportation, complete streets, multimodal transportation, energy burden reductions and increased community engagement are cited as actions that will spur economic recovery and address local equity issues. Expanding green infrastructure, climate resiliency, urban tree coverage, improving air quality and improving equity outcomes are among the highest priority climate actions in the next 18 months. However, specific strategies to accomplish equity-centered climate action remain a work-in-progress. A lack of a standard set of definitions and measurement for equity outcomes make it unclear for many cities on the best way to proceed. Cities have an opportunity to focus sustainability on community development and social entrepreneurship in areas that are underserved. They can create new equity-focused policies and define outcomes and goals that matter to their communities with local partners. Relying solely on community organizations will not be enough to sustain a lasting change; investing in city capacity through dedicated personnel and funding is also needed.

Immediate Climate Action Can Advance Health, Equity, and Economic Recovery

Since the onset of the pandemic, cities report a heightened awareness of the connection between climate, health, equity and economic outcomes. This has generated a shift in the approach to climate action planning that attempts to address the complexity of these issues by communicating across departments, groups, and incorporating different ideas. Climate

adaptation and resilience actions in municipal operations are increasing in both their importance and likelihood of implementation. City climate leaders responded to questions about changes in the importance and likelihood of implementation of programs specifically related to their own municipal operations. While climate resilience actions such as social vulnerability assessments for climate hazards (72%); compound risk planning and preparedness for climate, health and economy (67%); and leveraging climate adaptation planning for economic development (44%) have an elevated importance, the corresponding likelihood of an increase in implementation is lower. Top programs to support both the economic recovery and climate resiliency in the next 18 months are affordable energy efficient housing, restoring public transportation and increasing mobility, energy burden reductions, and supporting the expansion of renewable energy and a workforce for decarbonization (Table 1).

Supporting Public Health and Mobility Increase in Importance

Most city climate leaders report that responding to the emergencies triggered by the pandemic is shifting conversations from climate change issues to those addressing the immediate needs of the population, with public health being the highest priority. Establishing safe public transportation access, expanding pedestrian and bike paths, and communicating the impacts of climate and health risks are top actions that will take place in the next 18 months. Requirements for mask-wearing on public transit (65%) and passenger limits on mass transit (40%) have the highest response for new actions to initiate. Actions associated with health and restarting workplace activities such as advanced ventilation technologies (72%) and anti-viral and microbial materials in public facilities (72%) have increased in importance.

Decarbonization Programs and Ecosystem Support are Sustained

Programs that have long-term planning and funding cycles and incorporate technologies that have market maturity have maintained their importance and likelihood of implementation. Many cities had established energy efficiency programs prior to the COVID-19 pandemic and foresee continuing to implement these programs in the next 18 months. Programs for residential lighting (80%) and commercial buildings (70%) received high responses as actions to be preserved. One hundred percent of cities indicate that renewable energy procurement, rooftop solar, energy efficient retrofits, and CO₂ emission reductions for municipal facilities either remain important or are increasing in importance. Ninety-four percent of respondents indicate that urban tree canopy expansion and infrastructure improvement for climate adaptation will be preserved or initiated. Retraining a workforce for the green economy, weatherization and decarbonization are among the high priority actions in the next 18 months.

Community Engagement and Communication Continue to Challenge

Community engagement is a high priority in most cities. While overall communication and outreach for climate action programs during the pandemic is reduced and moved online, many cities are considering how to restructure their communication strategies. Cities face challenges in providing ways for constituents to adequately participate in events due to a documented lack of uniformity in wi-fi access. Reaching large numbers of residents in city

sponsored events such as town halls is not feasible on a digital platform. City leaders report that solving the challenges of engaging with the community cannot be solved in sustainability and environment departments alone and require a city-wide approach and financial investment to help bridge the digital divide. Strategies such as integrated planning and integrative decision-making are of greater importance in planning; however, they are unsure how to most effectively implement these changes.

Introduction

The year 2020 marks the beginning of a decade in which swift and widespread climate action is necessary to avoid the devastating effects of climate change by keeping global average temperature increase below 2 degrees Celsius. Many U.S. city leaders recognize the critical role they play in this transformation, and they launched ambitious climate action plans to address this global challenge.

The impacts of the pandemic bring new, urgent challenges for cities to grapple with including improving public health, rebuilding local economies in the midst of a severe recession, and reversing persistent inequities that have left socially vulnerable populations disproportionately burdened by the pandemic and the impacts of climate change. The economic contraction associated with the pandemic is introducing uncertainty about implementation of local climate action plans. Will the prolonged response to the pandemic increase and accelerate climate actions by local communities in the U.S, or postpone them as they deal with the immediate impacts of the shutdown, economic downturn, and public health crisis?

In response to this question, a team from Boston University and the Innovation Network for Communities surveyed a small set of city climate leaders in the U.S. to gain a critical perspective from practitioners working at the city level. The survey addresses questions about the current priority of climate actions in cities and the likelihood of implementation, the financial implications of the pandemic, and top climate actions that city leaders will take in the next eighteen months that impact climate change, the economy, and equity. Survey participants responded to over seventy questions related to climate actions that impact city-wide policies and municipal operations, indicating the status of these actions in their cities. While not exhaustive, our survey provides insight into how cities are pivoting to maintain and expand climate action in 2020 and beyond.

The survey results demonstrate that in the midst of multiple new challenges, many cities plan to improve public health and rebuild the economy in an equitable way as part of a broader effort that is integrated with city climate action plans. As one city official points out, “the COVID-19 pandemic has highlighted and reaffirmed that climate action represents a key opportunity to support local economic development and advance key outcomes related to health, equity, and resilience.”¹

This survey report is the third in a series of reports focused on climate action priorities for cities during the pandemic. The team from Innovation Network for Communities and Boston University released a first report in June 2020 on the deep parallels between COVID-19 and climate change in the context of cities. They argue that cities must maintain their climate action priorities in the face of the COVID-19 challenge, identifying strategies that

simultaneously address the inequitable impacts of the pandemic and of climate change.² The results outlined in this survey report confirm that this approach is emerging in many of the cities surveyed. While climate action is postponed in some cities, the pandemic is sharpening the focus on social inequities, and there is an evident attempt to understand how the pandemic response can be tied to future climate change action and economic opportunities.

In September, the team released a second report that assessed specific opportunities for city-level action, spanning the equity, energy, transportation, food security, mobility, green space, and waste sectors. The findings of that paper are consistent with what city climate leaders stated in the survey that informs this report. The impacts of climate change and the pandemic have similar attributes; they disrupt public health, economic stability and vulnerable populations bear the brunt of these impacts. Delaying responses to climate change now “risks disastrous and inequitable local consequences” in the future.³ However, emphasizing interconnections in planning between health, climate change, equity, and finding the economic opportunities for all constituents will build more resilient cities. A starting point involves incorporating systems thinking and community ownership into the process of planning and implementation of climate action.⁴

Methods

Our survey explores how climate action planning and prioritization, with a focus on social equity and economic issues, has changed in local U.S. governments during the pandemic. Twenty-five city climate leaders drawn from 21 U.S. cities and one Canadian municipality participated in the survey between July 6th and August 10th, 2020 (Appendix B). Through a series of open-ended questions and matrix table survey questions related to both emergent and long-standing environmental actions and policies, climate leaders indicated how their specific climate actions and policies are expected to change over the next 18 months.

The survey covered a wide range of actions, programs and policies related to climate change mitigation, adaptation, and resilience. Through a series of open-ended questions, city climate leaders were asked about the current prioritization of climate actions in their cities, the short and long-term financial implications of the pandemic and economic downturn, and what the most important climate change related actions will be in the next 18 months for their cities. The results of an online survey represent responses to 1) city-wide climate programs in areas of energy, equity, food security, health, housing, mobility, telecommuting, transportation, waste and workforce and 2) municipal operations programs in areas related to buildings, climate change, energy, ecosystems, infrastructure, technology and transportation.

Cities were selected to achieve a broad geographic representation, and all of them have an active climate action plan. It is important to note that respondent cities are not representative of nationwide demographics. The cities ranged in population size from 7,401 (Aspen, Colorado) to 2.3 million (Houston, Texas), and have varying rates of economic and racial or ethnic diversity. 42 percent of the surveyed cities have greater than 20 percent Black/African American and Latino populations. Nineteen of the surveyed cities have a higher percentage of persons in poverty than the national average in 2019 and 6 cities have a

higher unemployment rate than the US unemployment rate in July 2020 (Appendix C). Four of the surveyed cities are located in states that experienced a bigger drop in real GDP relative to the national average in 2nd Qtr. 2020 (Appendix C). The city climate leaders interviewed for the survey are working in the fields of sustainability and the environment for their cities and are directors or managers of climate change-related planning. The sample cities include members of the Urban Sustainability Directors Network (USDN), Southern Sustainability Directors Network (SSDN), and C40. The responses are shared in aggregate, anonymized form.

Survey Results

Climate Action Still a Priority but Revenue Dependent

Climate actions remain a priority for most cities surveyed since the onset of the COVID-19 pandemic, despite many demands on municipal resources. 65 percent of respondents stated that climate action is an equal priority while 35 percent described climate action as being a lower priority since the pandemic started (Figure 1).

In response to questions about the financial implications of the pandemic for city climate actions, survey respondents indicated that initiating new projects and sustaining existing actions that lack established funding or planning cycles is a challenge and depends more on how cities generate revenue rather than a downward shift in priorities for climate action. Cities dependent on sales tax (with reduced tourism) and income tax (with high unemployment) are facing deeper challenges. The economic downturn has resulted in operating resource constraints in the cities interviewed and impacts the timing of the implementation of many climate actions and programs. Furloughs have been introduced and staffing for climate action programming is reduced.

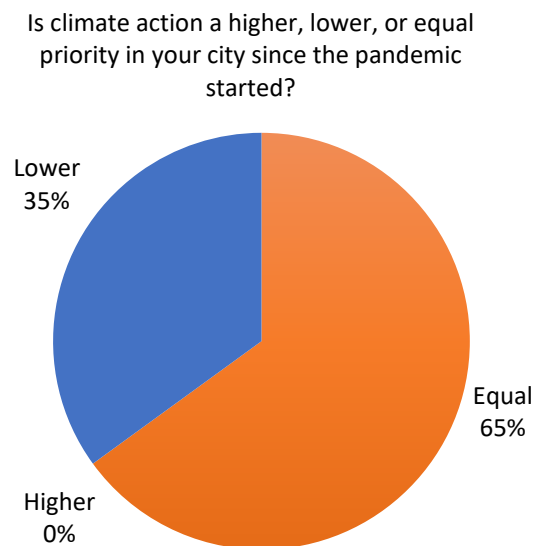


Figure 1. The majority of cities surveyed report that climate action is still a priority.

For many cities, implementation of climate actions is postponed due to staffing reassignment to more immediate economic and health issues and due to a freeze on hiring new staff and outside consultants. Financial support for projects that were not initiated before the pandemic has evaporated and the attention of city councils and mayor's offices for climate action programs is diverted in some cities. Constrained access to financing for staffing and

implementation is prompting a reassessment of revenue generation for many cities. In response to revenue declines, new partnerships are emerging. Cities are more dependent on partnerships with industry, non-profits, and foundations for sustained financial support of actions and programs as revenue is likely to become more constrained in the future.

However, some cities with diversified revenue streams are able to continue and, in some cases, expand on existing climate actions. Several of these cities have maintained staffing and increased programming and outreach. Building this kind of capacity requires cities to reevaluate the role of the private sector as an asset to climate action planning and implementation. Several examples emerged from city climate leaders that have diversified funding sources, these include:

- partnering with universities, industry, NGO's, and foundations to create innovation ecosystems that support new technologies, companies, and a decarbonization workforce.
- launching an urban high-performance "buildings" hub that provides capacity building, training, and market transformation programs for energy efficient buildings.
- partnering with car companies to fund electric vehicle infrastructure and oil companies to fund climate mitigation and resilience programs.

"Some cities are keeping their head down and sitting out the disruption and will get back to prior plans once it has passed. Others are embracing the opportunity in the midst of the disruption, working out how to engage with other movements on their own terms."

Equity Takes Center Stage but Lacks a Clear Roadmap

Cities report a renewed focus on questions of equity related to unemployment, health, and the environment, a result of both recent widespread racial justice protests and the disproportionate negative impacts of the pandemic on low-income communities and communities of color. To better understand how city climate leaders are incorporating equity-related actions into city planning, respondents were asked which actions will be preserved, initiated, postponed, eliminated or are not applicable (N/A) in the next 18 months.

Over 85 percent of cities surveyed indicated that increasing the proximity of parks and tree canopy coverage in underserved neighborhoods are actions that will be preserved or initiated (Figure 2). Requiring affordable electricity and heating standards, support for community involvement and access to bike share will be preserved or initiated by over 60 percent of cities. However, taking actions in areas such as rooftop solar in low-income neighborhoods, environmental justice criteria in planning, disaster responsive safety nets and increased public transportation access in underserved neighborhoods varies widely depending on the city. The varied distribution and high percentage of non-applicable responses to these programs indicate dissimilar planning for equity in the sample cities and reveals an opportunity for further research to shed light on these differences.

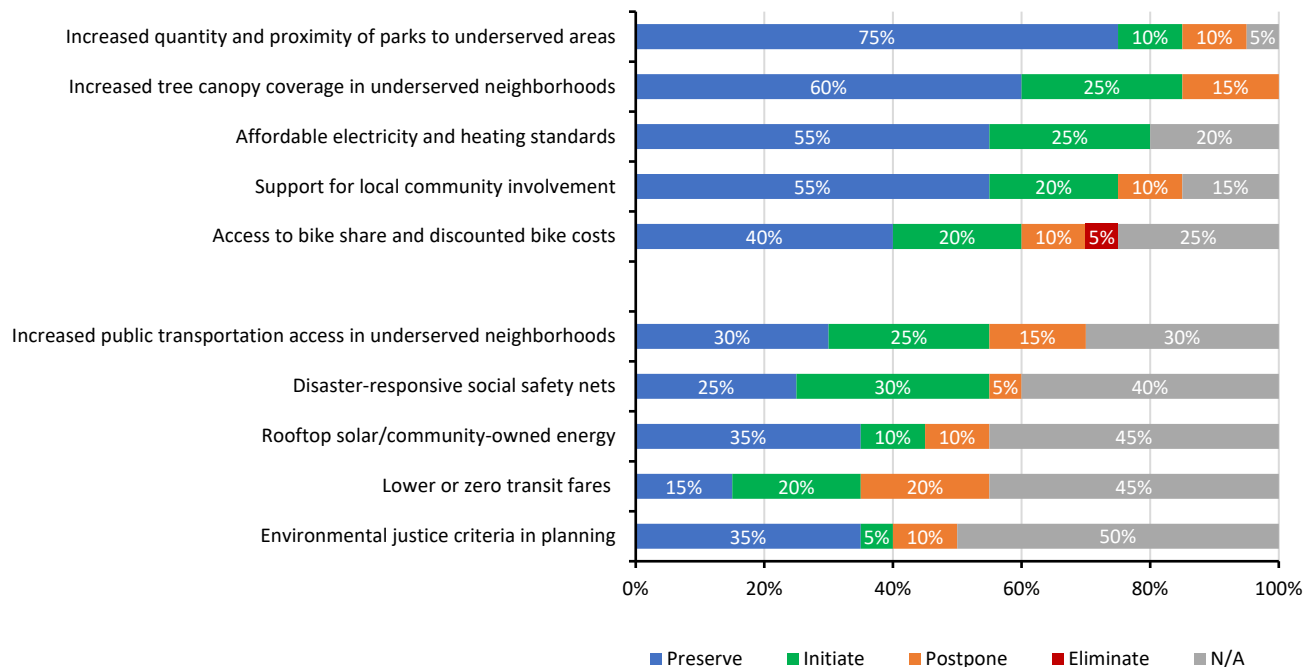


Figure 2. Status of city-wide policies that address equity issues in the next 18 months.

Climate leaders were asked to list the top actions cities can take in the next 18 months that will impact both climate change and equity. Affordable energy efficient housing, restoring public transportation, complete streets, multimodal transportation, energy burden reductions and increased community engagement are all listed as actions that will have the largest impact in these areas, they also have the biggest impact to economic recovery. Expanding green infrastructure, climate resiliency, urban tree coverage and improving air quality are listed as important actions and incorporating equity considerations in planning are among the most important climate actions to occur in the next 18 months (Table 1).

“Defining equity as integral to climate action plans has been amplified during the COVID pandemic and illustrates why it is so important to truly center equity in climate work, but it is a journey we are all on, individually and for local government.”

The survey results reveal that there is a much greater emphasis on equity-based policies and programs in all areas of climate action planning. For some well-resourced cities, attention is shifting dramatically to equity issues; their climate work is strongly affected now by the undeniable need of vulnerable communities in their cities and by the racial justice protests that occurred during the summer. Cities in this survey are approaching equity issues in a way that is unique to their city, and building relationships with local communities to come up with solutions. These cities are taking different approaches to integrating equity into climate action planning such as:

- examining how climate adaptation and resilience are tied to local food availability and the connections between their response to COVID-19 and food security;

- boosting bus routes and walkability in low-income and minority areas of the city and retrofitting jobs and providing job training opportunities for low-income communities where joblessness is high;
- prioritizing incentives for water conservation and energy efficiencies for low-income communities over wealthier neighborhoods and improving air quality to address the high number of children with asthma in some neighborhoods.

Challenges remain as city climate managers redefine the role of equity in climate actions. A lack of dedicated personnel in city organizations and a standard set of definitions and measurement for equity outcomes make it unclear for many on the best way to proceed. Keeping neighborhoods affordable as they gain amenities and services and addressing historical practices to prevent displacement is important to city climate leaders. Effectively integrating equity in planning will require diverse strategies and plans that meet the unique goals and attributes of each city.

Table 1. The following actions are considered to be the most important and will have the biggest impact to climate change, equity, and economic recovery in the next 18 months (2020-2021). N=20			
	Most Important Climate Actions next 18 months	Biggest Impact to Climate Change and Economic Recovery	Biggest Impact to Climate Change and Equity
Housing			
Affordable energy efficient housing	✓	✓	✓
Transportation and Mobility			
Restoring public transportation	✓	✓	✓
Expanding mobility and micro-mobility; complete streets	✓	✓	✓
Multi-modal transportation		✓	✓
Expanding bus and bike lanes		✓	
Energy			
Energy efficiency for residential and municipal buildings	✓	✓	
Renewable energy procurement and deployment	✓	✓	
Electric vehicle infrastructure		✓	
Energy burden reductions		✓	✓
Climate			
Climate resilience and air quality improvements			✓
Expanding green infrastructure	✓		✓
Climate Action Planning			
Incorporating equity considerations in planning	✓		
Outreach of climate change impacts	✓		
Increased community engagement		✓	✓
Workforce			
Workforce for weatherization and decarbonization		✓	
Retraining workforce for a green economy		✓	✓

Immediate Climate Action Can Advance Health, Equity, and Economic Recovery

City climate leaders report that addressing the COVID-19 crisis is a top priority in their cities, but many are seeking ways to align solutions to emergencies associated with the pandemic with both renewed economic growth and climate resilience. Climate change preparedness and risk planning increased in importance in surveyed cities as a way to better protect human well-being and stabilize the economy in the future. Some city climate leaders are now focusing on the big “R”, prioritizing resilience planning that spans health and human well-being and economic recovery with equity at the center of the plan, rather than focusing only on environmental changes.

City climate leaders responded to questions about changes in the importance and likelihood of implementation of programs specifically related to their own municipal operations. The survey results indicate that climate adaptation and resilience actions in municipal operations increased in their importance and likelihood of implementation. Climate resilience actions such as: social vulnerability assessments for climate hazards (72%), compound risk planning and preparedness for climate, health and economy (67%), and leveraging climate adaptation planning for economic development have a (44%) increase in importance in the next 18 months; however, the corresponding likelihood of an increase in implementation is lower. Disaster mitigation (39%), hazard projections (33%), and the expanded use of green infrastructure for climate adaptation (33%) have a smaller increase in importance and likelihood of implementation (Figure 3).

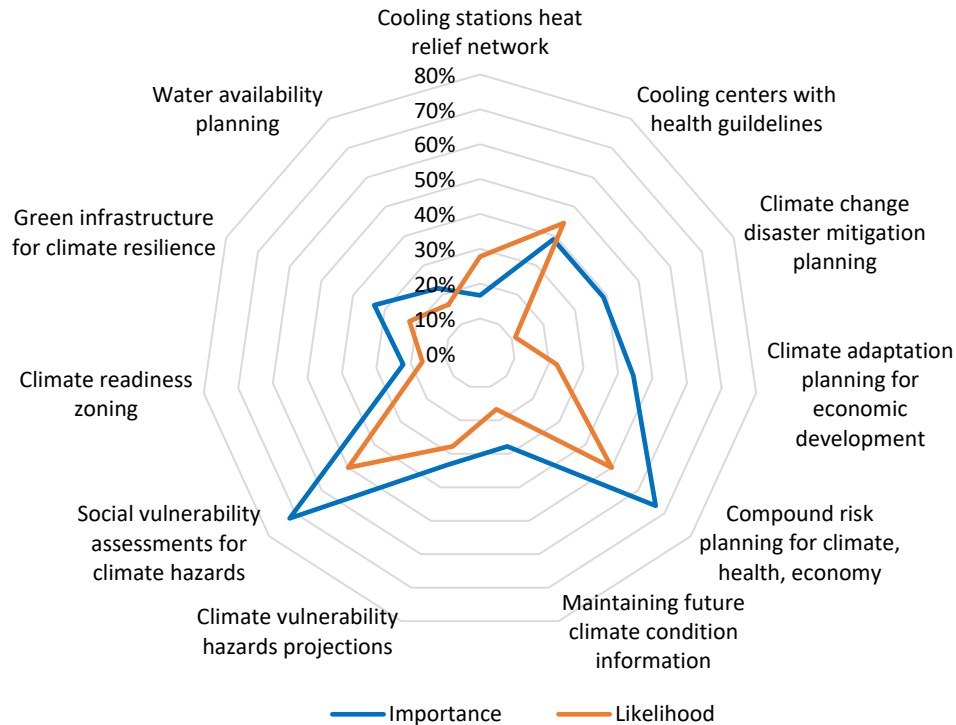


Figure 3. Climate actions for municipal operations that *increased* in importance but have a lower likelihood of implementation since the onset of the pandemic.

Since the onset of the COVID-19 pandemic, cities report a heightened awareness of the connection between climate, health, equity, and economic outcomes. This has generated a shift in the approach to climate action planning that attempts to address the complexity of these issues by communicating across departments, groups, and incorporating different ideas. For example, some surveyed cities are creating programs that focus on the intersection of affordable housing, energy efficiency, transportation, and economic development, incorporating input from several municipal departments and communities. This approach opens up potential opportunities for cities to redefine how they generate revenue, communicate with their constituents and develop planning strategies that incorporate targeted community input from the start.

City leaders indicate that strategies such as integrated planning and integrative decision-making are of greater importance in planning, however they are unsure how to implement these changes most effectively. 67 percent of cities expressed an increased desire to understand the compound risks and co-benefits of climate action related to health, equity, and economy (Figure 3). Specifically, many cities are attempting to connect economic opportunities to energy, environment, health, and equity outcomes but this remains an area that is not well understood. Climate resiliency is as important now as climate mitigation in most cities, and some are finding ways for the programming to occur concurrently. Some foresee a time when creating separate climate action plans may be a process of the past and climate change actions will be integrated into other plans (transportation, planning, economic development, and environment) using terms such as resilience, energy, environment, and equity in place of “climate”.

Supporting Public Health and Mobility Actions Increase in Importance

Most cities report that responding to the COVID-19 emergency is shifting conversations from climate change issues to those addressing the immediate needs of the population, with public health being the highest priority. In the process, the types of strategies that city leaders are embracing to address the pandemic also apply to climate change. As one climate leader put it, “the pandemic represents a practice run for future climate driven catastrophes”.

City climate leaders were asked to indicate which city-wide policies will be preserved, initiated, postponed or eliminated in the next 18 months. City officials expressed a heightened sense of urgency to reestablish safe public transportation access and expanded mobility options in the next 18 months. Requirements for mask-wearing on public transit (65%) and passenger limits on mass transit (40%) have the highest response for new actions. Fifty percent of respondents indicate that they will initiate programs that increase the awareness of climate change and health risks and 40 percent plan to expand pedestrian space in streets (Figure 4).

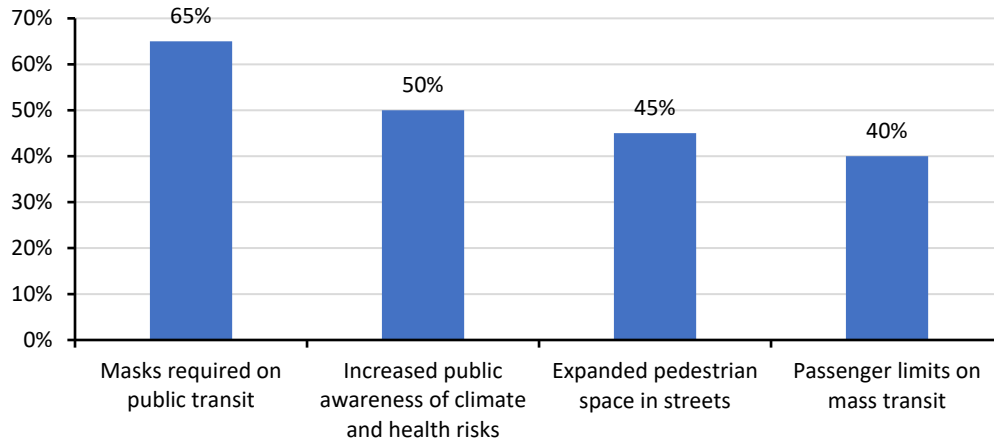


Figure 4. City-wide policies that will be initiated in the next 18 months.

City climate leaders responded to questions about changes in the importance and likelihood of implementation of 35 climate actions related to municipal operations during COVID-19. Plans to integrate technologies that expand communication access, monitor air quality, and increase health and safety increased in importance but are not as likely to be implemented in the next 18 months. In response to a heavier reliance on digital technology to communicate with constituents, 84 percent of cities surveys indicate that increasing mobile wi-fi hotspots is important but only 61 percent think they are likely to be implemented. Actions associated with health and restarting workplace activities such as advanced ventilation technologies (72%) and anti-viral and microbial materials in public facilities (72%) increased but also have a lower likelihood of being implemented. Expansion of urban tree canopies increased in importance (44%) (Figure 5).

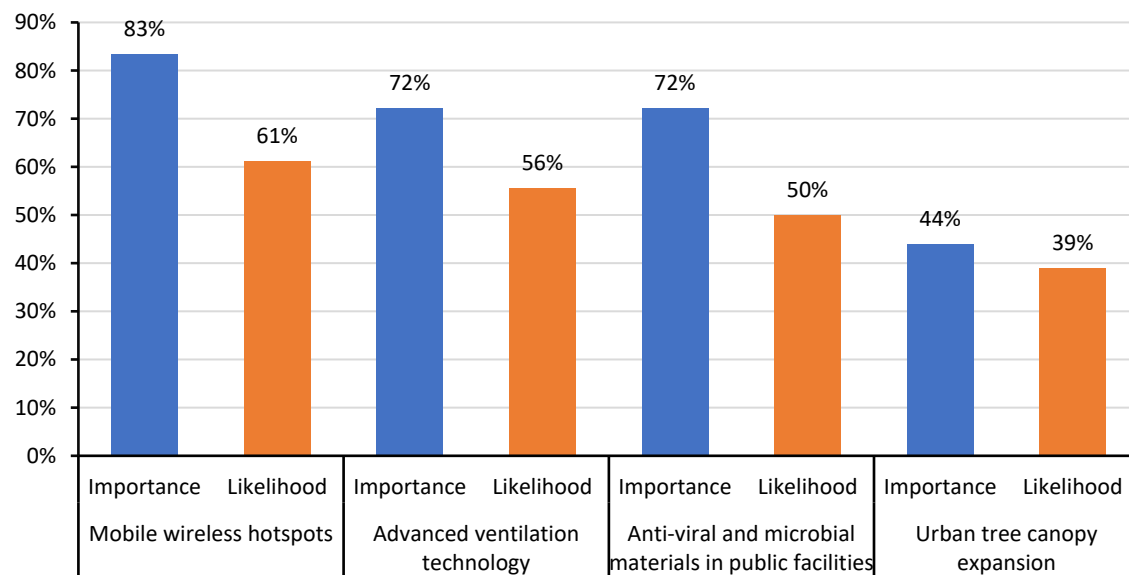


Figure 5. Municipal operation programs that increased in importance and the corresponding likelihood of implementation in the next 18 months.

Renewable Energy, Energy Efficiency Programs and Ecosystem Support are Sustained

Programs that have long-term planning and funding cycles and incorporate technologies that have market maturity are maintaining their importance and likelihood of implementation. Many cities had established energy efficiency programs prior to COVID-19 and foresee continuing to implement these programs in the next 18 months. Programs for energy efficient residential lighting (80%) and commercial buildings (70%) received high responses as actions to be preserved. A majority of respondents indicate that they will preserve residential rooftop solar (70%), renewable energy purchasing options (60%) and electric vehicle infrastructure (60%) in the near-term. Programs that promote the positive health impacts of open space and parks (95%) are also being preserved or initiated. Mobility-related policies such as expanding biking and walking areas will be preserved or expanded in 90 percent of cities surveyed. Access to healthy food options is also highly prioritized: 90 percent of respondents indicate they will preserve or initiate programs promoting and expanding food pantries and 85 percent of respondents indicate they will preserve programs promoting and expanding community gardens and urban agriculture. Equity-related climate actions that increase parks and tree canopy coverage in underserved areas will be preserved or initiated by 85 percent of cities (Figure 6).

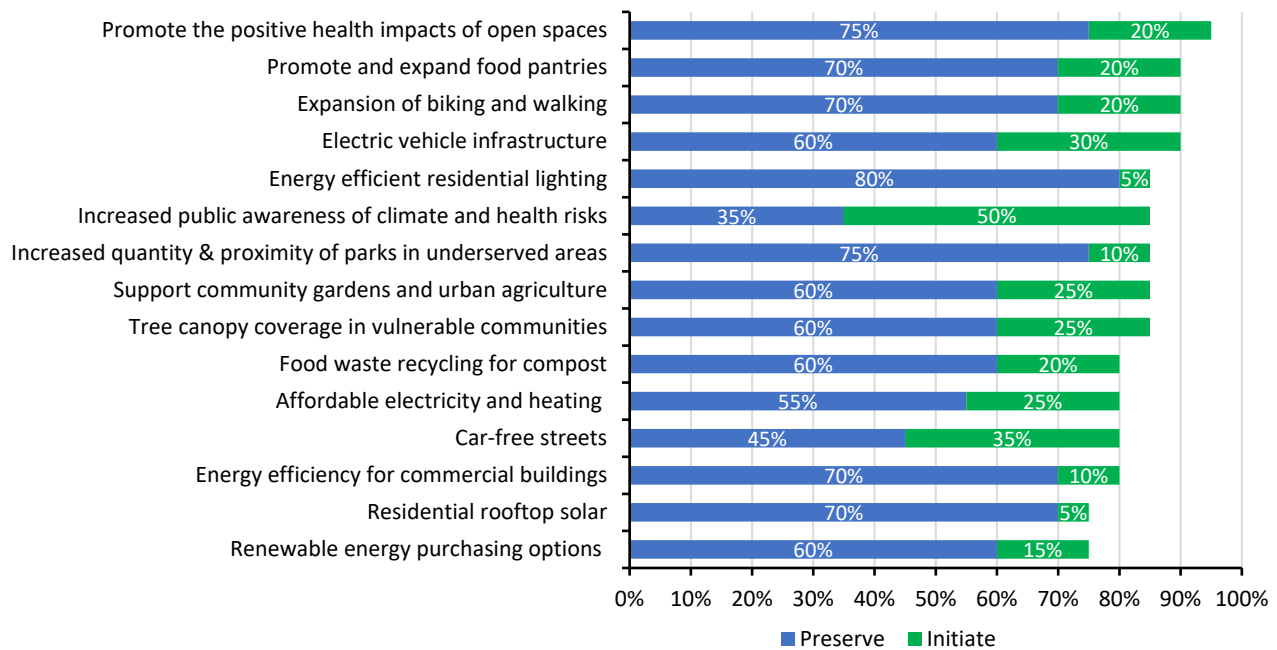


Figure 6. City-wide policies that will be preserved and initiated in the next 18 months.

100 percent of cities indicate that energy efficient retrofits, rooftop solar, renewable energy procurement, and CO₂ emission reductions for municipal facilities are still important and increasing in importance in a few cities. Water shed protection (94%) and new open space (82%) infrastructure improvements for climate adaptation (72%) and restoration of ecosystems and urban forests (78%) stayed the same in importance for most cities. Urban

tree canopy expansion increased in importance by 44 percent in cities surveyed, reflecting an increased focus on climate resiliency and adaptation actions for municipal operations in the next 18 months. Investments in newer technologies that reduce GHG emissions such as smart energy grid infrastructure (83%), and energy storage procurement (72%), stayed the same in importance to implement (Figure 7).

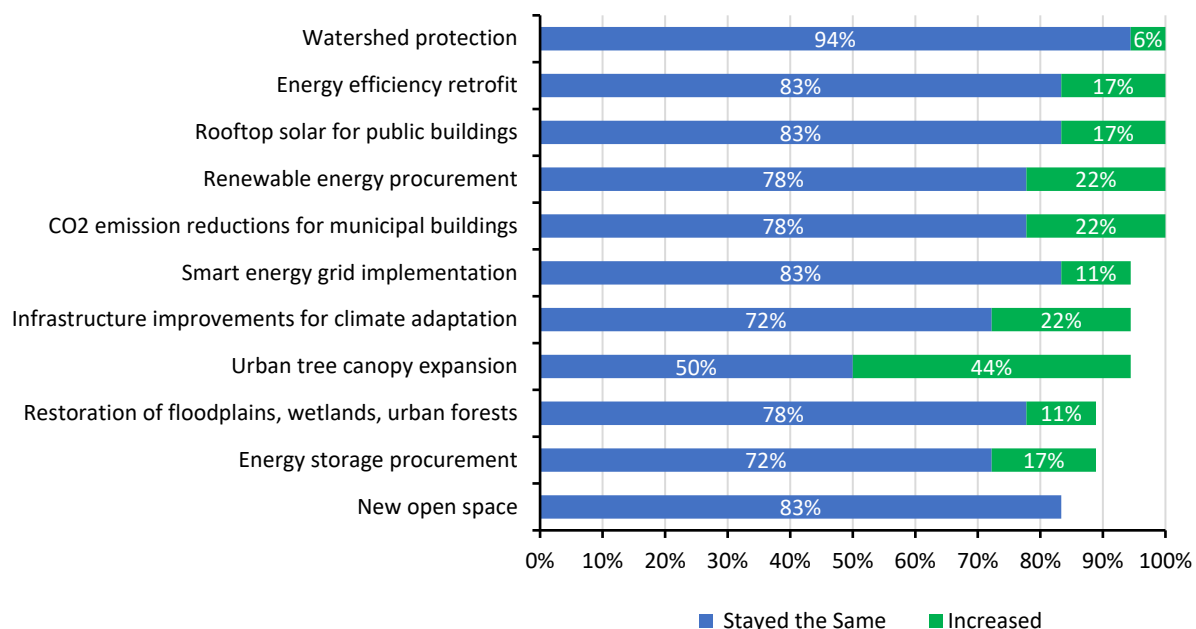


Figure 7. Climate change related programs for municipal operations that stayed the same and increased in importance in the next 18 months.

Community Engagement and Communication Continue to Challenge

Community engagement is a high priority in most surveyed cities. While overall communication and outreach for climate action programs during the pandemic has been reduced and moved online, many cities are considering how to restructure their communication strategies. They face challenges in providing ways for constituents to adequately participate in events, noting a documented lack of uniformity in wi-fi access. Reaching a large number of residents in city sponsored events such as town halls is not feasible on a digital platform. City leaders report that the challenges of engaging with the community cannot be solved in sustainability and environment departments alone and will require a city-wide approach and financial investment to help bridge the digital divide. Solutions unique to each city have emerged in discussions with city leaders. One city is using Federal CARE Act funding to create a pilot program to expand wi-fi access across their city. Several cities are reaching communities with mailers and postcards and developing carbon neutrality strategies with story maps and videos that solicit feedback rather than relying solely on online communication strategies.

To expand their reach in the absence of public events, surveyed cities are increasing online communication through blogs, webinars, newsletters that coincide with key climate action

milestones and public health updates, examining ways to combine outreach with other city departments. Online applications for community access through map-based platforms that show utility and transportation costs by area and the environmental impacts of proposed city programs are also being explored. Cities' climate action managers are redefining climate action as "climate, health and equity", expanding the scope and possible outcomes of climate planning in the future. These plans are integrating climate actions with community issues; "Meeting people on their terms and their turf" is a growing model of engagement. Survey respondents are eager to learn what other cities are doing to support communication activity, and how to build on inclusive digital communication opportunities.

Areas for Future Study

We find that there are several areas that may warrant further study to better understand the underlying reasons for variations in city responses to city-wide policies. City leaders indicated that several of the policies that were used in the survey are not applicable to their planning process. It is not always clear whether this is because the city is simply not undertaking these efforts, they lack jurisdiction or authority to do so, or because the intervention is not relevant in their community. Policies that are not directly related to a pandemic response such as congestion pricing (74%), on-demand transit updates at dedicated stops (70%), net zero carbon standards for affordable housing (55%) and climate preparedness for residential buildings (50%) have high non-applicable (N/A) responses (Figure 8).

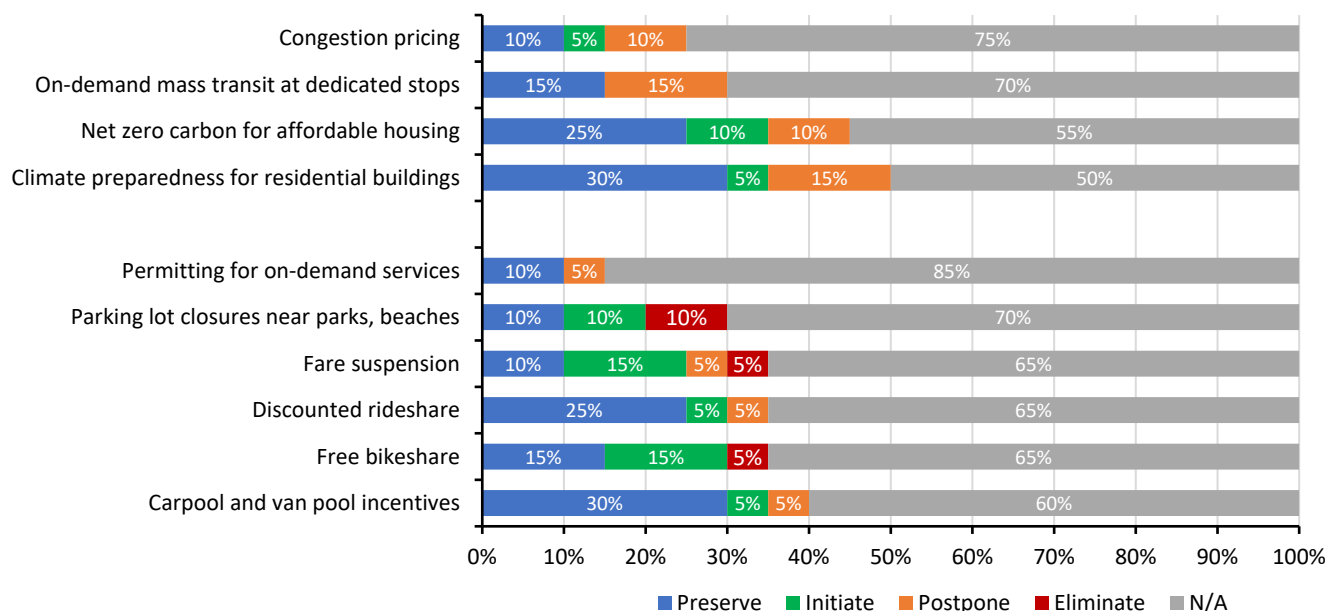


Figure 8. City-wide policies with high percentage of non-applicable (N/A) responses.

Several city-wide programs that address sustainability, transportation, mobility, and workforce development reflect high variability across respondents. Zero waste implementation goals (55% preserve/initiate vs. /45% postpone/not applicable) adding bus routes and rapid bus lanes (60% preserve/initiate vs. 40% postpone/not applicable) and

green jobs incentives and training (55% preserve/45% initiate) are actions with high variability in responses. Programs that address equity issues such as microlending for local food businesses (55% preserve/45% initiate), rooftop solar and community owned energy in low-income neighborhoods (55% preserve/45% initiate), disaster responsive social safety nets (55% preserve /45% initiate) and lower transit fares for low-income users of public transit (35% preserve /55% initiate) suggest that there are different approaches to these actions depending on the city (Figure 9). These responses present an opportunity to better understand why there are disparities in city responses and how these programs may relate to city climate action planning in the future.

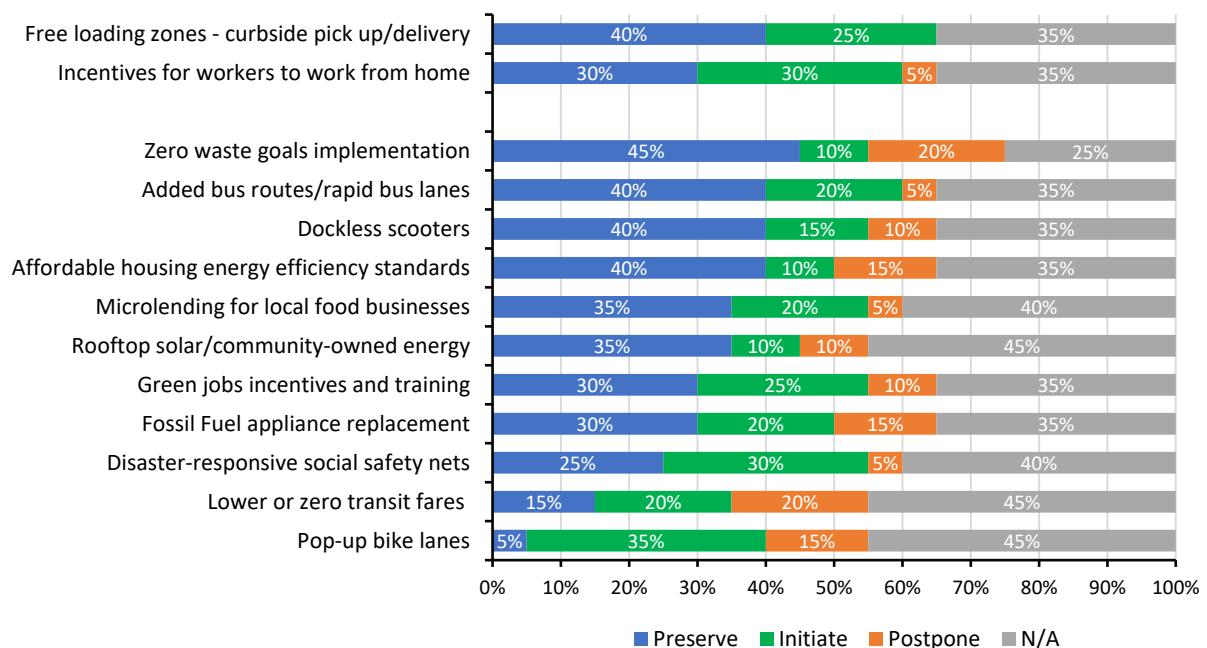


Figure 9. City-wide policies with a high variability of responses to preserve, initiate, postpone and non-applicable (N/A).

Conclusion

The results of our survey suggest that there is reason for optimism that climate action will continue during and after the pandemic, and cities will emphasize climate resiliency, disaster preparedness, and equitable policies. The survey demonstrates that cities are continuing to prioritize climate actions, primarily programs that have established funding. Uncertainty revolves around new and future projects whose fate relies on unpredictable national economic outcomes, state funding priorities, and city revenue streams. To address financial shortfalls, cities are exploring ways to diversify their revenue streams. Surveyed cities are finding it beneficial to partner with industries, foundations and non-private organizations, such as non-profits and universities, for financial, administrative, and technical support.

City officials also stressed the importance of addressing social equity in climate action planning. The devastating impacts of the pandemic on communities of color and low-income and the rising unemployment rate is exposing the underlying vulnerability of these residents. Cities are identifying the inequities and taking advantage of the opportunity to prioritize

equity-based climate programs, e.g., by emphasizing climate resiliency, establishing affordable and energy efficient housing, expanding accessible transportation options, and urban forests. Community engagement also plays a crucial role; however, the digital divide is hampering equitable outreach and communication. In response, cities are increasing wi-fi support and increasing computer and internet access by safely opening up libraries and community centers.

City officials are working to address the nexus of climate, health, equity and economic opportunities in their climate action planning. The COVID pandemic has demonstrated that climate actions can no longer be considered in isolation from other priorities. Cities can pursue economic opportunities that concurrently activate job expansion, improve public health, reduces carbon emissions, heightens climate resiliency, and progress toward social equity. Integrated planning and decision-making established during the pandemic can help cities prepare for future disasters, including the escalating climate crisis. Responding to the pandemic has created a renewed emphasis on housing, healthcare, and jobs.

The pandemic is sharpening the focus on historical social inequities in cities. This renewed focus is creating a shift in planning for climate change that seeks to center equity in future planning. However, the way forward is unclear, and generate more questions than answers. If a municipal fleet is electrified, how does this help vulnerable communities? How can electric vehicles provide safe transportation options for residents in low-income communities? Many are asking how they can work together with community members in a way that they hadn't before by reaching a diverse set of constituents – artists, business people, athletes, community leaders, engineers and scientists – to better understand the needs and potential solutions for their city.

Cities can focus sustainability on community development and social entrepreneurship in areas that are underserved. There is an opportunity to create new equity-focused policies and define outcomes and goals that matter to their communities with local partners. However, relying solely on community organizations will not be enough to sustain a lasting change; investing in city capacity through dedicated personnel and funding is also required. Rebranding economic development to prioritize equity issues and reframing climate actions to integrate health and equity is providing fresh perspectives on these issues in some of the surveyed cities.

This shift in perspective is increasing the importance of climate adaptation and resilience actions that integrate outcomes that address areas of risk and opportunity for health, the environment and the economy. While this shift is illustrated in these survey results, the likelihood of implementation is also in question for many city climate leaders. They are dependent on the future stability of national and state economies and the ability of cities to generate new streams of revenue, as well as working with constituents in new ways to generate partnerships that support new initiatives and substantively contribute to implementation.

Appendices

Appendix A. Online Survey Responses

CITY-WIDE POLICIES IN THE NEXT 18 MONTHS

Question 1. Please indicate if you think these programs will be preserved, initiated, postponed, or eliminated in the next 18 months in your city.

Energy

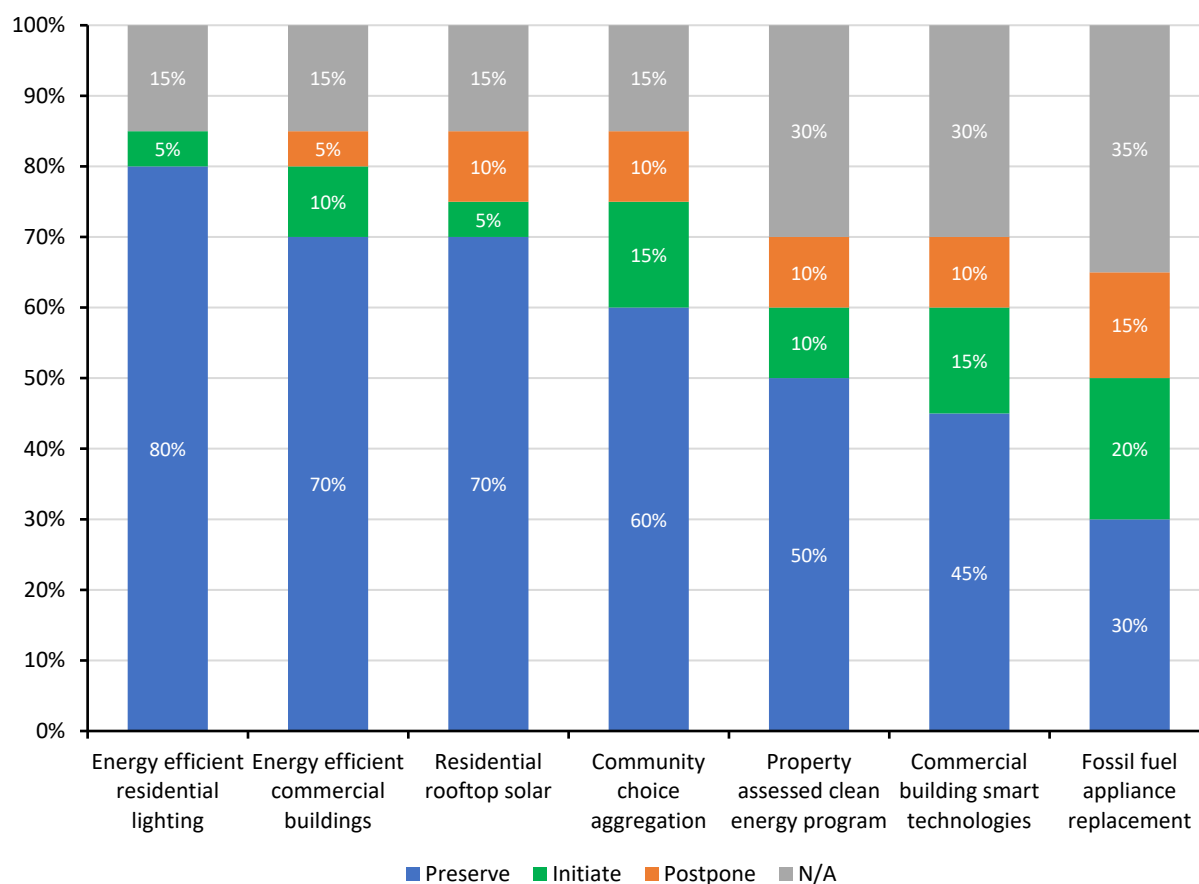


Figure 10. Many cities had established energy efficiency programs prior to COVID-19 and foresee continuing to implement these programs in 2020 and 2021. Energy efficient programs for residential lighting (80%) and commercial buildings (70%) received high responses for the actions to be preserved. A majority of respondents indicated that they will preserve community choice aggregation (60%) and property-assessed clean energy program (PACE) (50%) in the near-term, and programs to implement commercial building smart technologies (45%) and fossil fuel appliance replacement (30%) are also preserved but vary more in their importance. Programs focused on providing affordable energy standards in low-income and under-served communities are also being preserved (55%) and initiated (25%) (Figure 11).

Equity

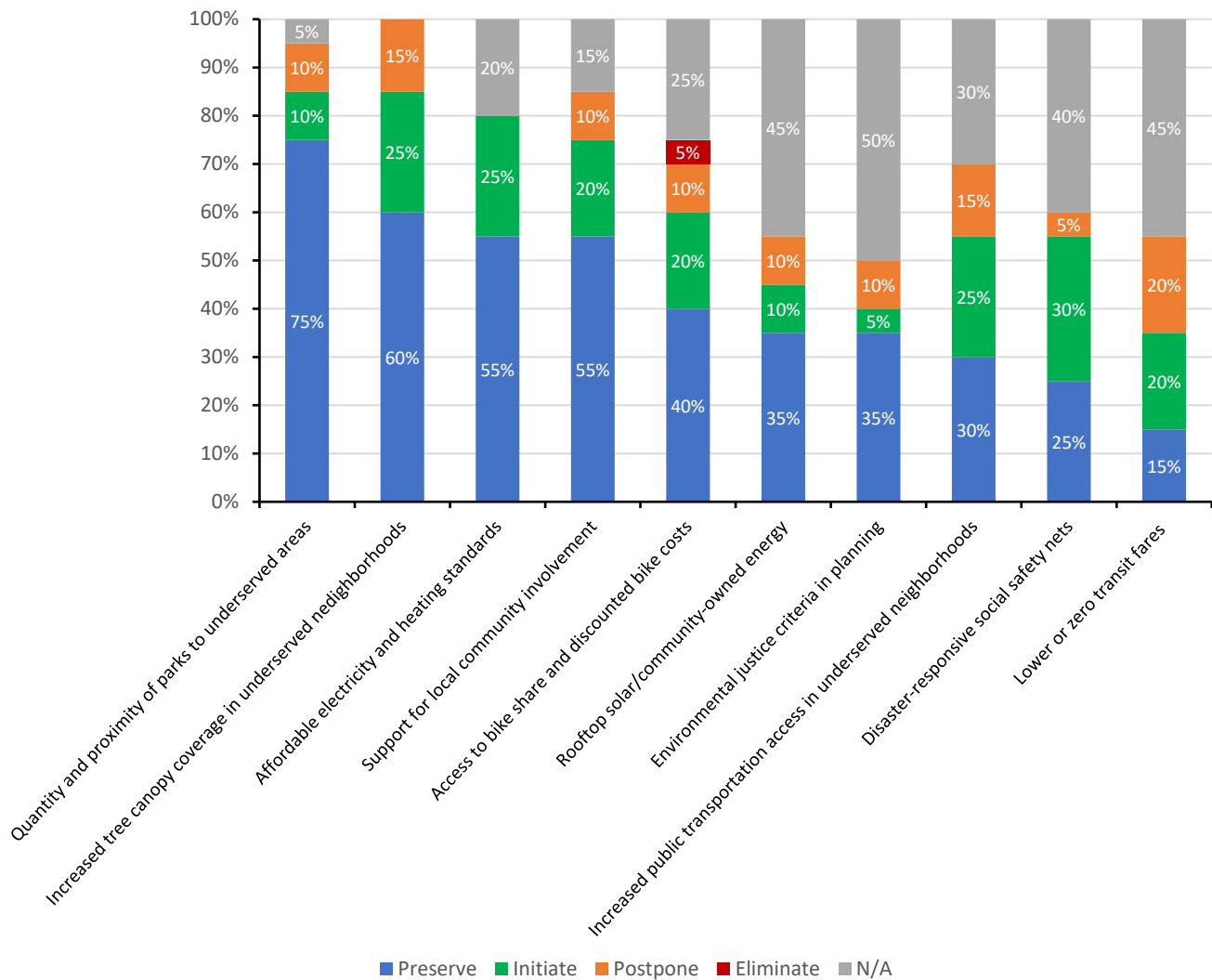


Figure 11. Cities are prioritizing equity actions. Many cities had established programs related to equity prior to COVID-19 and plan to continue implementing these programs in 2020 and 2021 these include: increased quantity and proximity of parks in high need and underserved areas in the city (75% preserved/ 10% initiated), increased tree canopy coverage in vulnerable communities (60% preserved/ 25% initiated), and increased affordable electricity and heating standards (55% preserved/25% initiated). 75 percent of cities are also preserving or initiating programs that support local community involvement in establishing and implementing these plans. Actions such as access to bike share, public transportation access, social safety nets, community solar and environmental justice criteria in planning have a high variability in responses indicating each city has a different approach to these programs.

Health and Food Security

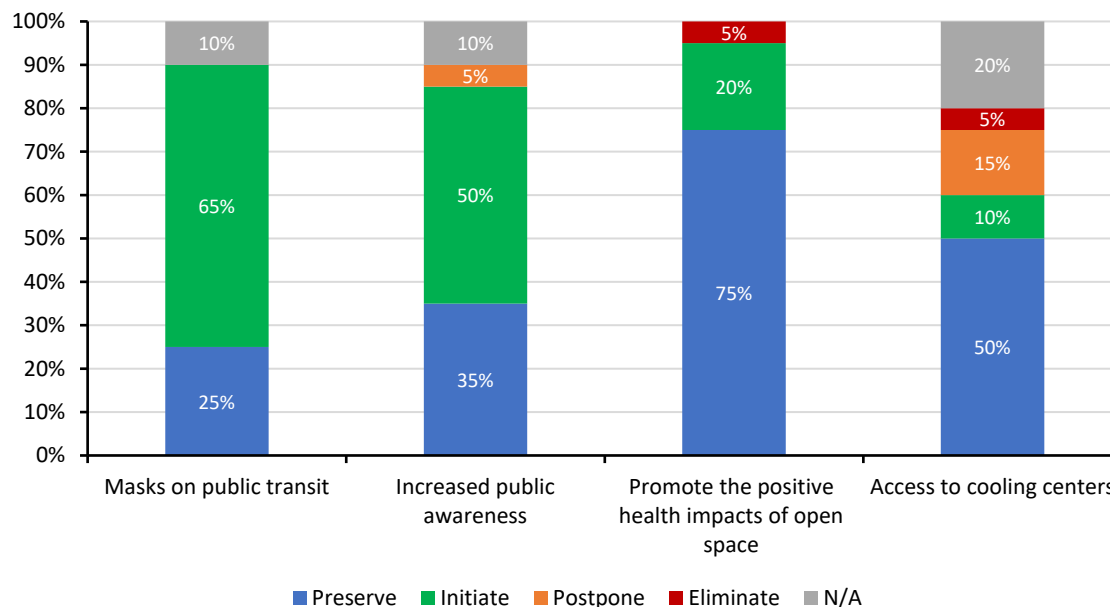


Figure 12. Actions that reestablish safe public transportation and support COVID-19 health guidelines are becoming a top priority. A majority of respondents indicate that they will initiate programs that require masks on public transit (65%) and increase public awareness of climate and health risks (50%), fewer respondents (25% and 35%, respectively) already have such programs in place and plan to preserve them. Programs that promote the positive health impacts of open space and parks are being preserved (75%), with an additional 20% of respondents planning to initiate this program in the next 18 months.

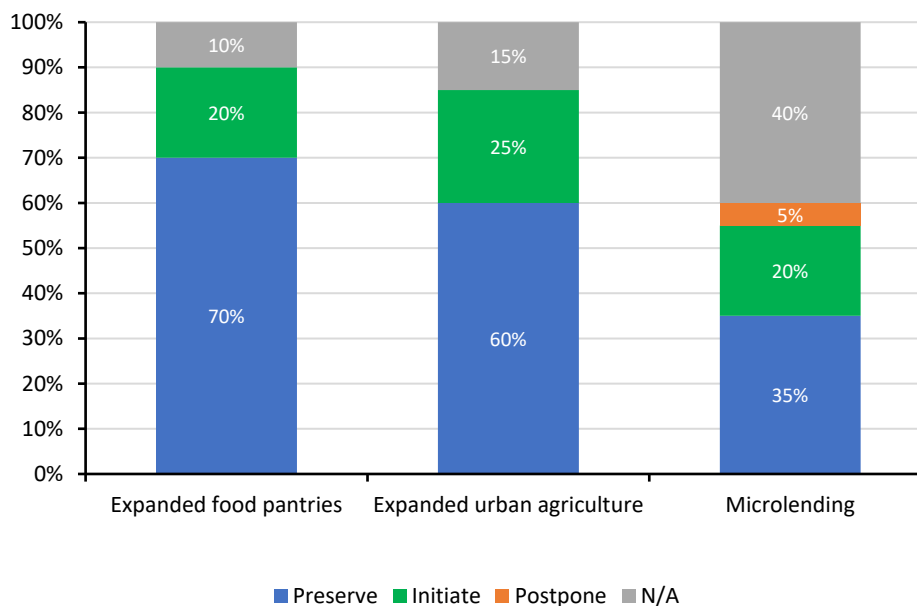


Figure 13. Access to healthy foods options is also highly prioritized: 90% of respondents indicated they will preserve (70%) or initiate (20%) programs promoting and expanding food pantries and 85% of respondents indicated they will preserve (60%) or initiate (25%) programs promoting and expanding community gardens and urban agriculture.

Mobility and Transportation

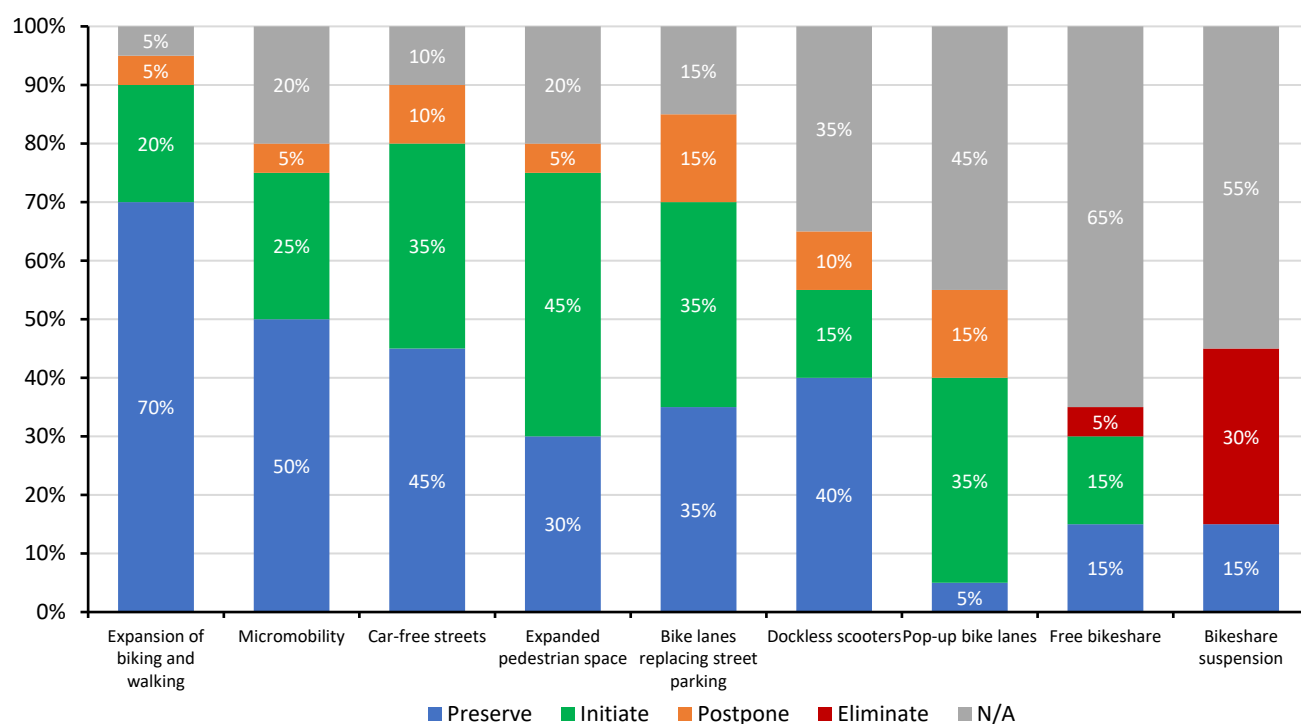


Figure 14. Actions that promote healthy living and expanded mobility options will be initiated in the next 18 months.

Mobility-related policies such as the expansion of biking and walking (70%) and micromobility (50%) actions are preserved in the next 18 months. Expanded pedestrian space (45%), bike lanes replacing street parking (35%), and car-free streets (35%) will be initiated. Dockless scooters and pop-up bike lanes programs vary by surveyed city.

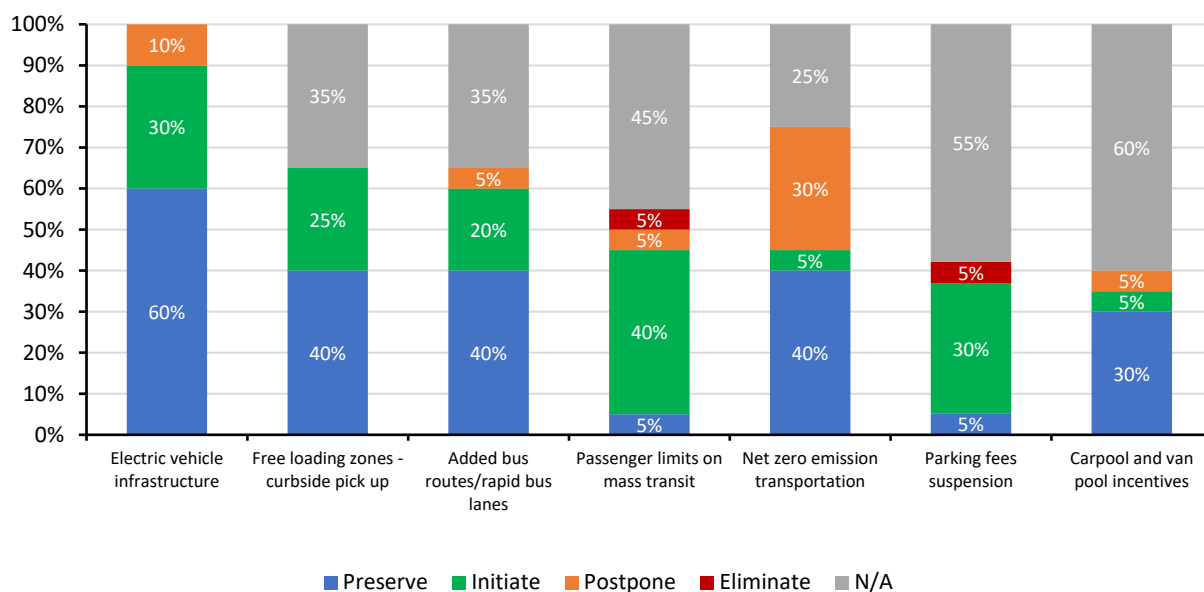


Figure 15. Climate policies related to transportation have a high variability in responses. 60 percent of cities will preserve electric vehicle infrastructure and 30% will initiate this program.

Actions related to transportation such as added bus routes and net zero emission transportation have a high variability of responses between preserve, initiate, and postponing actions. Responses to the pandemic such as free loading zones, passenger limits on mass transit, and carpool and van pool incentives also vary across cities.

Economic Opportunities

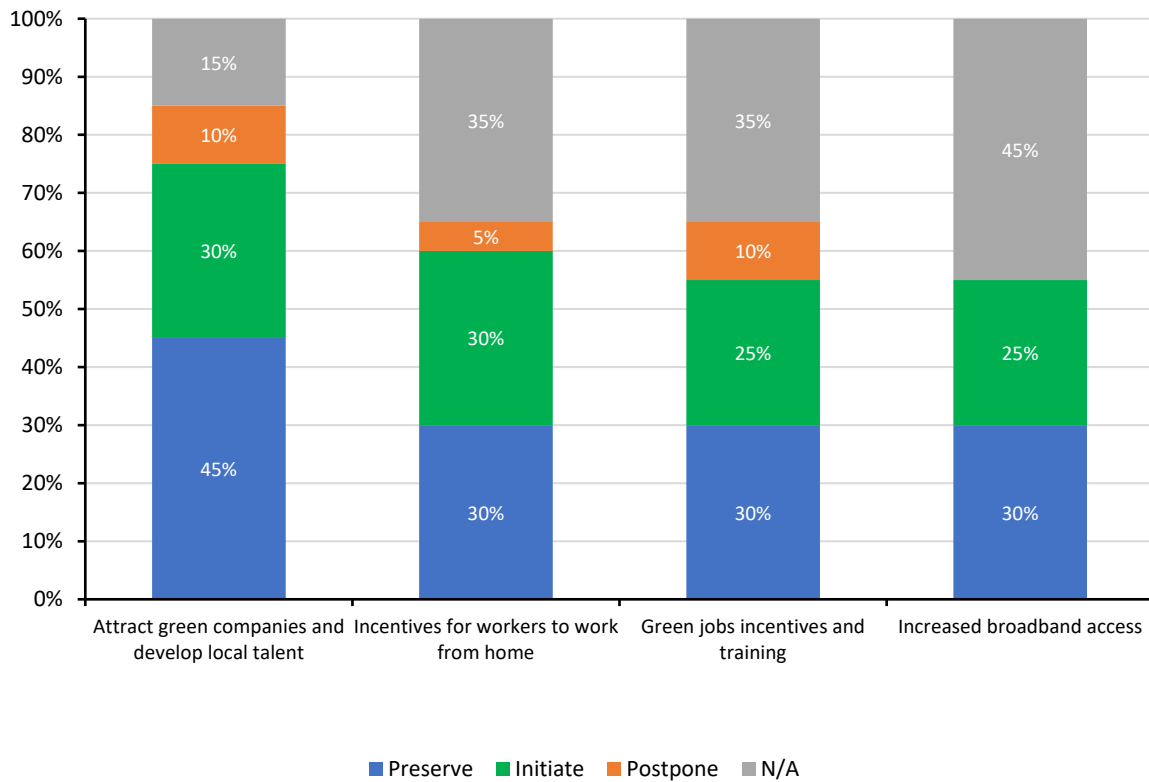


Figure 16. Local economies are heavily impacted by the COVID-19 pandemic. Cities are supporting green job employment such as attracting green companies and developing local talent (45% preserve, 30% initiate) and 55% of surveyed cities are preserving and initiating programs that support green jobs incentives and training. Additionally, as more people are working from home due to the pandemic, many cities are prioritizing telecommuting actions. 55 percent of cities surveyed indicated that they will preserve and initiate incentives for workers to work from home and will increase broadband access, but these policies do not apply to over 35% of respondents.

Housing

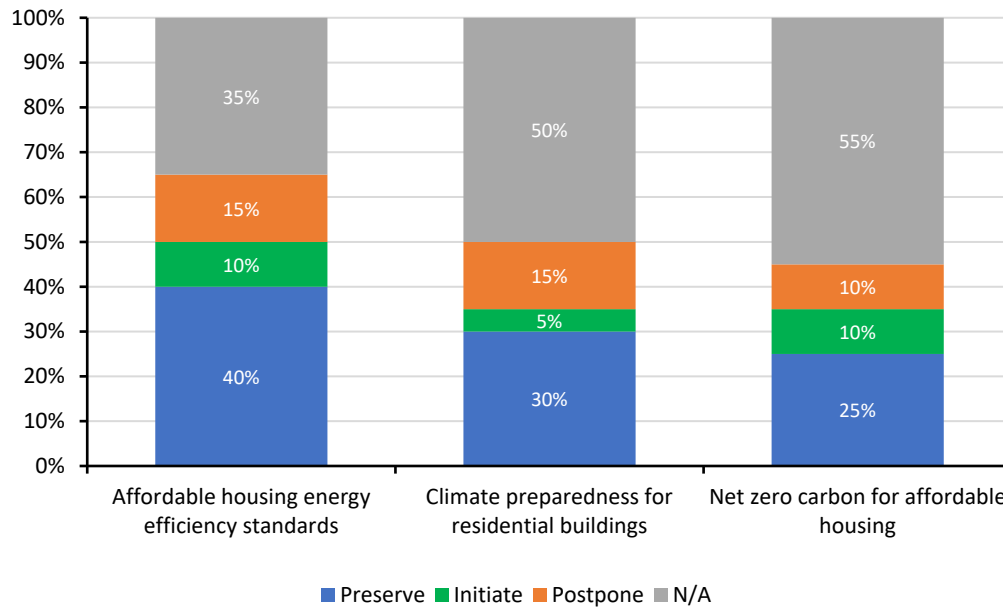


Figure 17. Current climate-related housing policies are being supported, but most cities are not implementing new programs. Current programs that support affordable housing energy efficiency standards (40%), climate preparedness for residential buildings (30%), and net zero carbon for affordable housing (25%) are being preserved or initiated in less than half of surveyed cities. Over 50% of city climate leaders indicate that actions for climate preparedness and carbon emission reductions in housing are not applicable in their cities.

Waste

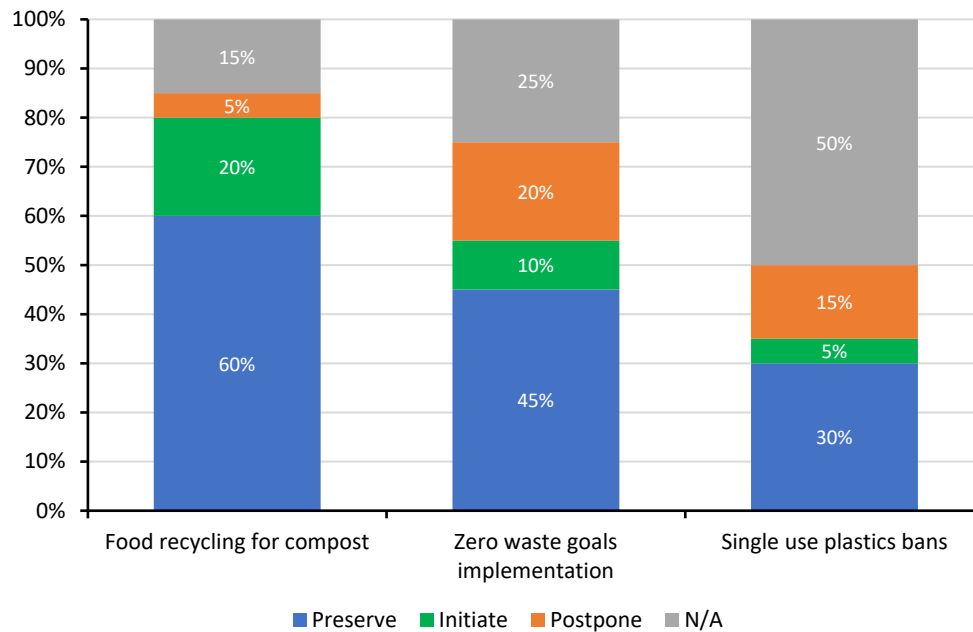


Figure 18. Waste reduction programs are still being prioritized by cities. Cities plan to preserve composting (60%), zero waste goals implementations (45%), and single use plastic bans (30%) in the next 18 months. Cities are also moderately beginning to implement such programs.

MUNICIPAL OPERATIONS IN THE NEXT 18 MONTHS (2020- 2021)

Question 2: Please indicate the changes in importance and likelihood of implementation of these climate actions for municipal operations in your city in the next 18 months due to the pandemic and economic downturn.

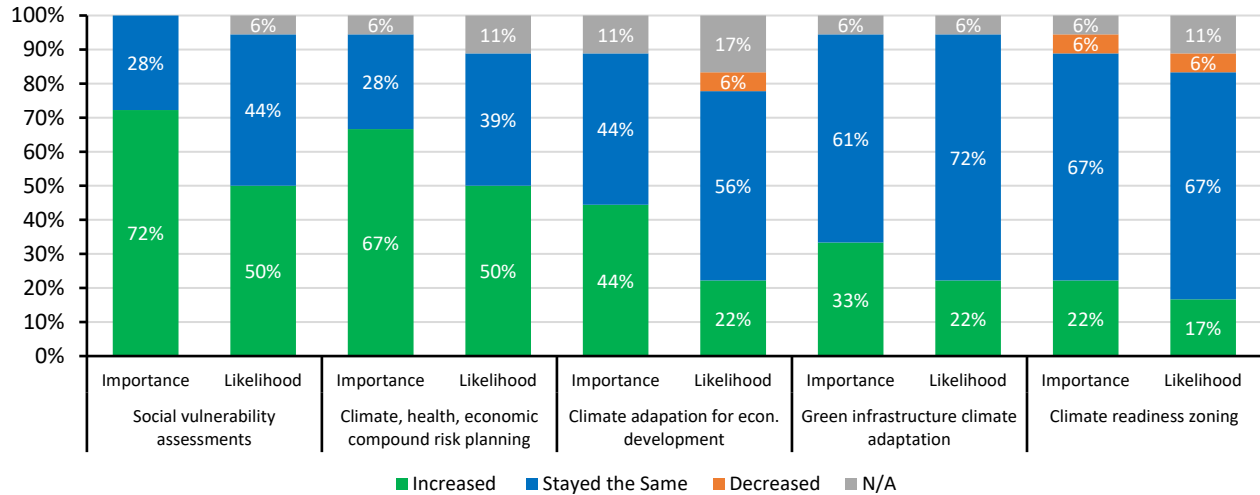
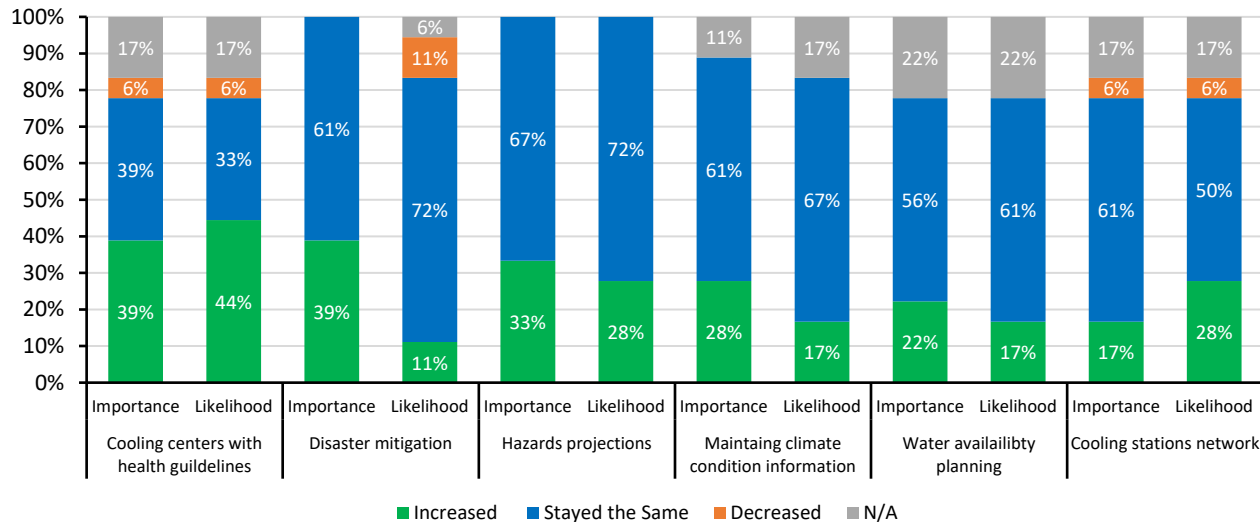


Figure 19. Climate adaptation and resilience actions for municipal operations largely retained and increased their importance in planning. Social vulnerability assessments (72%) and climate, health and economic compound risk planning (67%) increased in importance in cities surveyed. This is due in part to the heightened awareness of the connection between climate, health, equity and economic outcomes. Climate adaptation for economic development (56% stayed the same, 22% increased), green infrastructure for climate adaptation (72% stayed the same, 22% increased) and climate readiness zoning (67% stayed the same, 17% increased) stayed the same and slightly increased in importance in the next 18 months. However, while these actions are recognized as being important, the likelihood of implementation is lower.

Figure 20. Responding to weather extremes and maintaining climate resiliency programs stayed the same for most cities.



The immediate need to provide shelter from urban heat stress increased by 39% in importance and the likelihood that it will implemented increased by 44%. Preparing for future climate events through disaster mitigation (39%) increased in importance but the likelihood that it will be implemented is lower (11%). A need for hazards projections (33%) and maintaining climate conditions (28%) information increased in importance.

Buildings

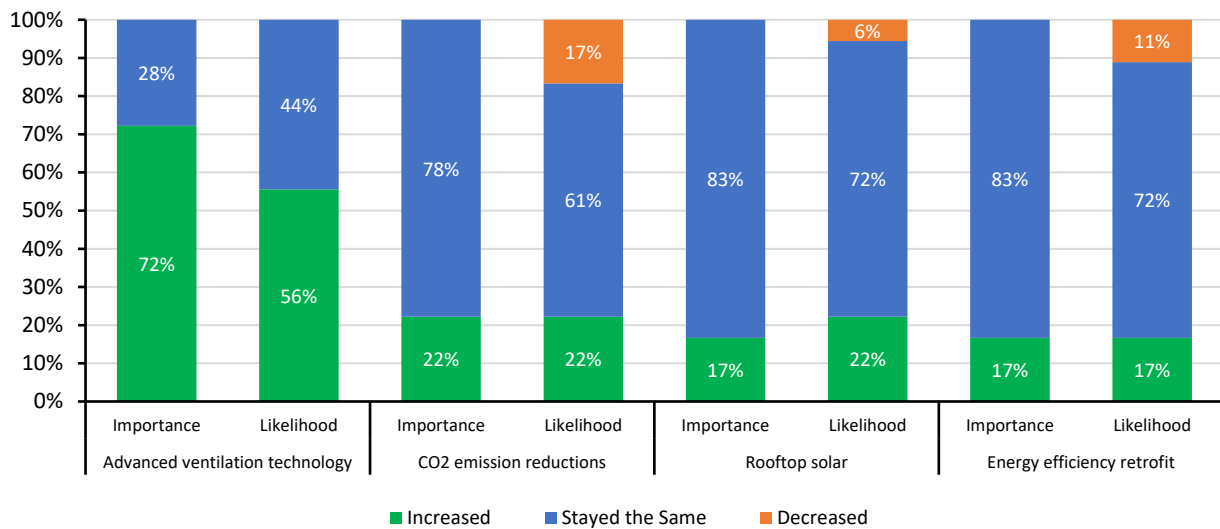


Figure 21. Actions associated with health and restarting workplace activities increased in importance. Emission reduction and energy goals for municipal buildings stayed the same in importance. Advanced ventilation technologies increased by 72% in importance but the likelihood of implementation (56%) is lower. Rooftop solar (83%), energy efficiency retrofits (83%) and CO₂ emission reductions (78%) are still important and but the likelihood of implementation is lower in the next 18 months.

Energy

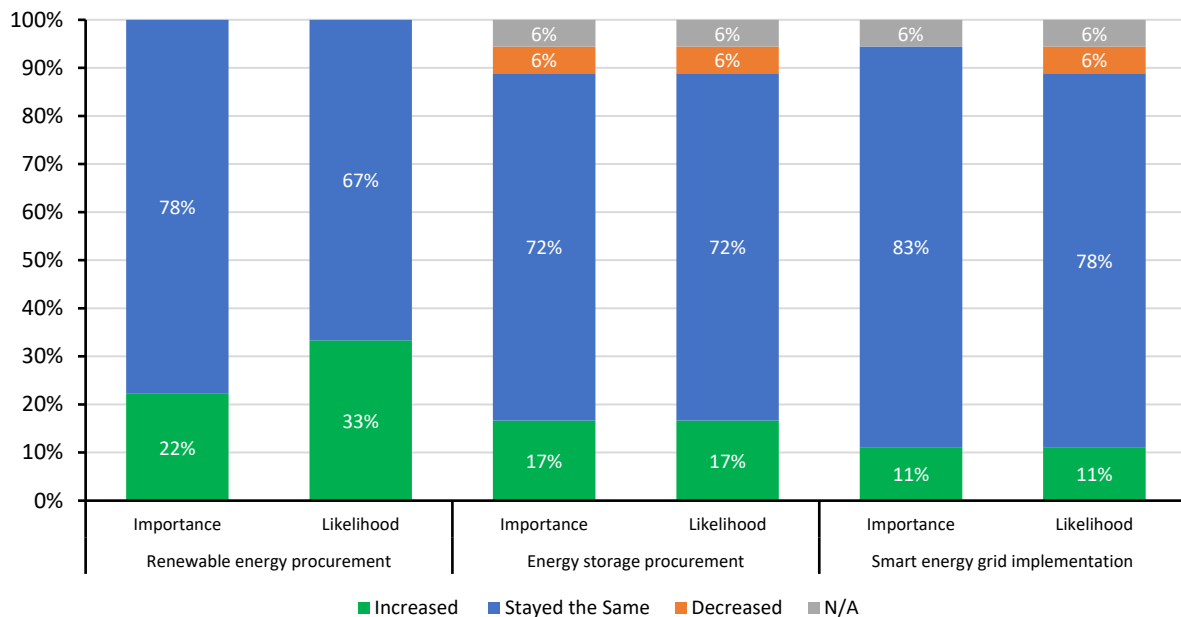


Figure 22. Programs that have longer planning cycles and are more likely to be already supported in current budgets stayed the same in importance. Cities indicate that renewable energy procurement (78%), energy storage procurement (72%) and smart energy grid implementation (83%) are important but the likelihood of implementation is lower in the next 18 months.

Ecosystems

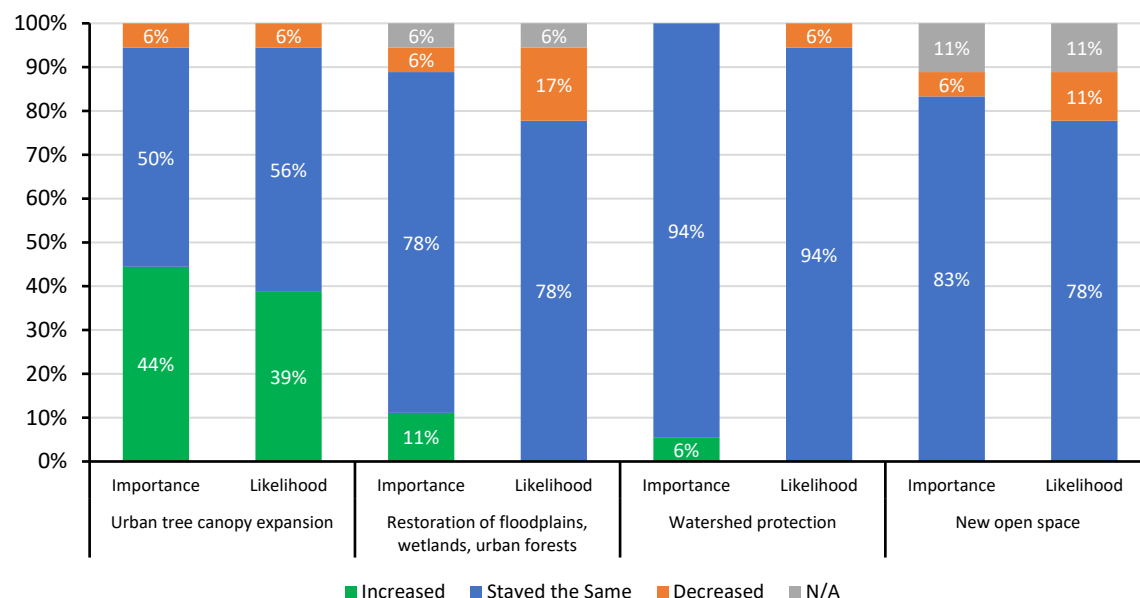


Figure 23. Projects that improve the health of urban natural areas and climate resiliency stayed the same in importance. Watershed protection (94%), new acquisition of open space (83%) and the restoration of floodplains, wetlands and urban forests (78%), stayed the same in importance. Urban tree canopy expansion increased in importance by 44%.

Infrastructure and Transportation

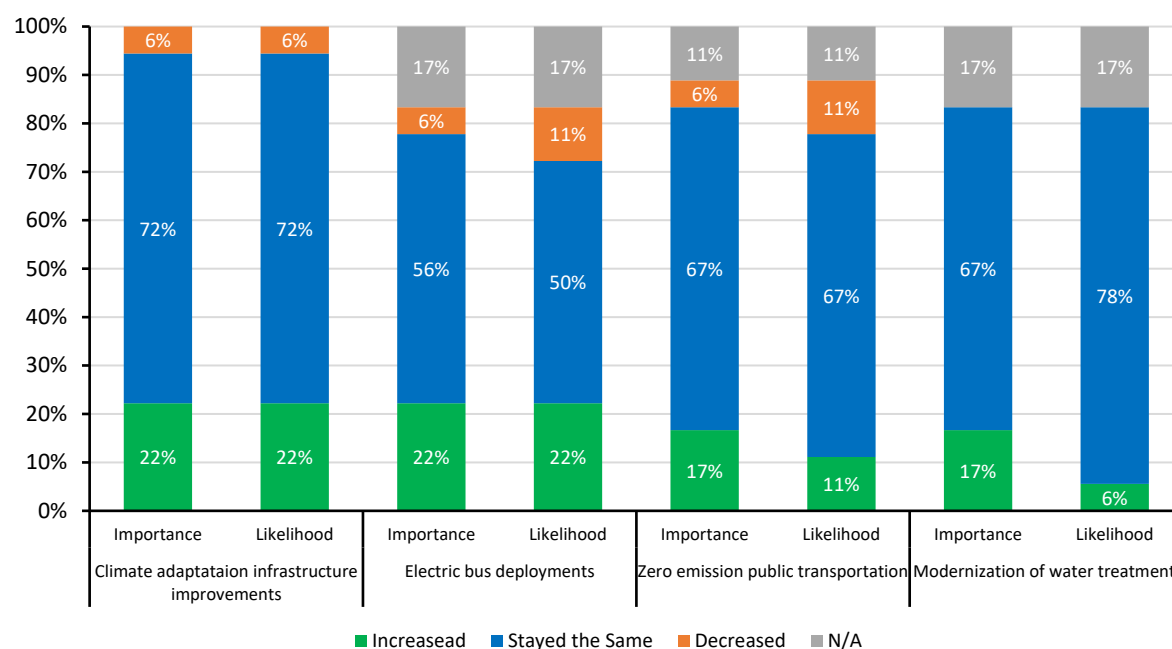


Figure 24. Projects related to climate adaptation and low-emission municipal transportation stayed the same in importance. Climate adaptation infrastructure improvements, electric bus deployments, zero emission public transportation, and water treatment modernization, maintained their importance and likelihood of implementation in over 70% of the cities surveyed.

Technology

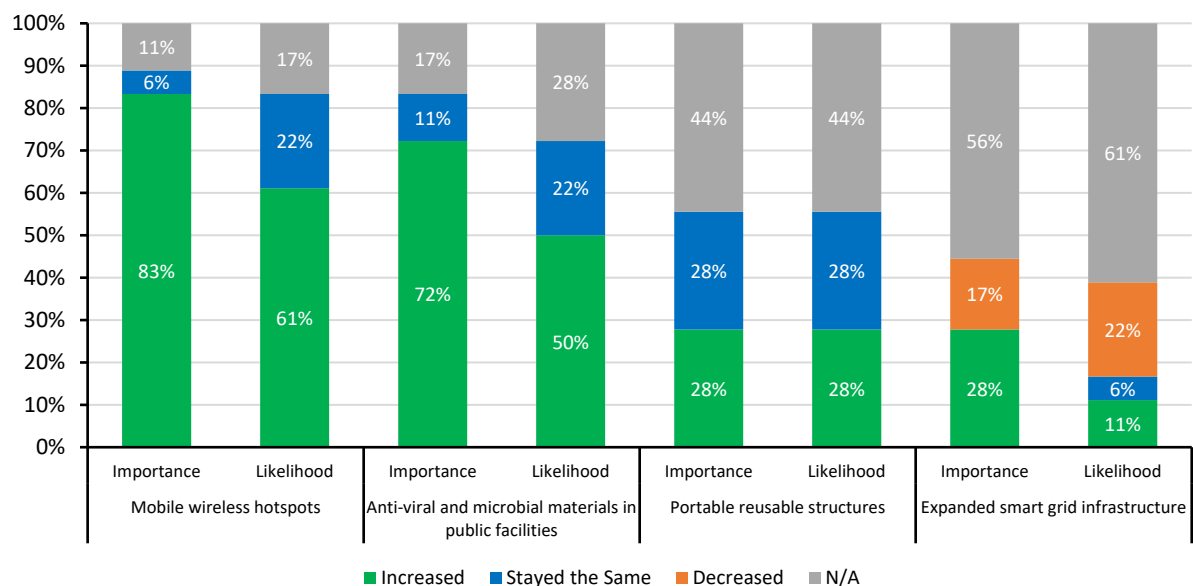


Figure 25. In response to a major shift to online communication practices during the pandemic, over 80% of the cities surveyed indicate that increasing mobile wireless hotspots is important in the next 18 months. There is a similar increase in incorporating anti-viral materials in public facilities (72%) in an attempt to control contamination. Portable reusable structures increased in importance (28%) and is a non-applicable program (44%) for cities. Expanded smart grid infrastructure for municipal operations decreased in importance in 17% of cities and is a non-applicable climate program in 56% of cities.

Air Quality and Noise Reduction

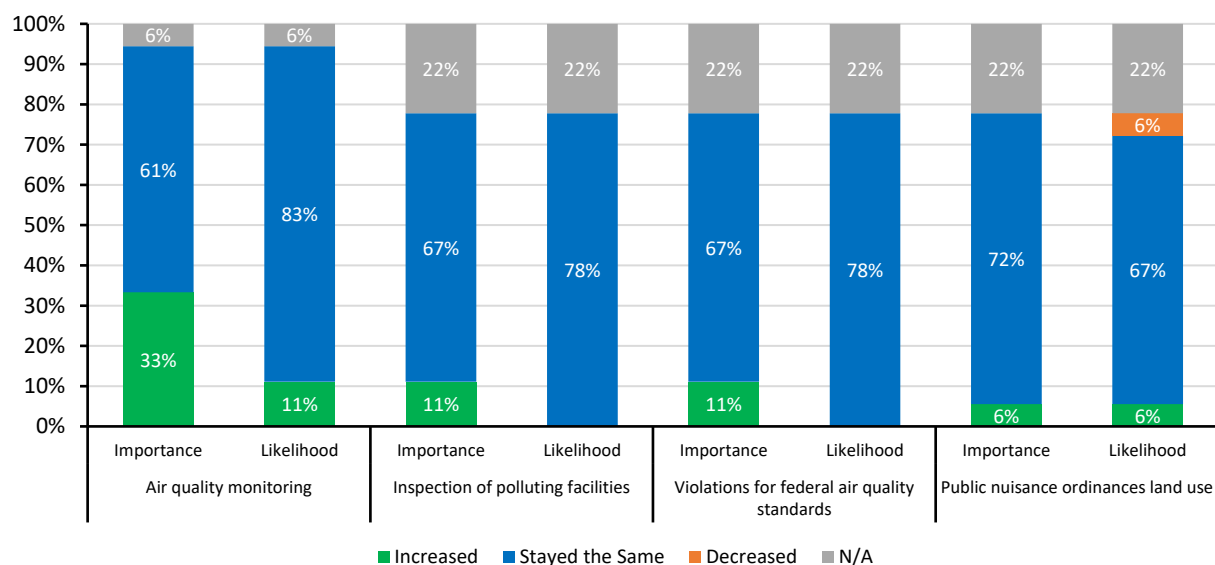


Figure 26. Plans to integrate technologies to improve health and safety increased in importance and likelihood. Air quality monitoring increased in importance by 33% in the cities surveyed however the corresponding increase in likelihood that it will be implemented (11%) is much lower. Routine provisions for the inspection of polluting facilities (78%), maintaining air quality standards (78%), and public ordinances for land use (67%) are likely to be implemented in the next 18 months.

Appendix B: List of City Climate Leaders

The following list includes the names and cities of the survey respondents and participants in the research.

Region	Name	City	State
<i>Northeast</i>	Katherine Johnson	Washington DC	District of Columbia
	Carl Spector	Boston	Massachusetts
	Leah Bamberger	Providence	Rhode Island
<i>Midwest</i>	Barbara Buffaloe	Columbia	Missouri
	David Norwood	Dearborn	Michigan
	Oliver Kroner	Cincinnati	Ohio
	Gina Bell	Dubuque	Iowa
<i>Southeast</i>	Sara Kane	Sarasota	Florida
	Chris Castro	Orlando	Florida
	Peter Nierengarten	Fayetteville	Arkansas
	Camille Pollan	New Orleans	Louisiana
	Ashley Painter	Oldsmar	Florida
	MaryPat Baldauf	Columbia	South Carolina
<i>Southwest</i>	Zach Baumer	Austin	Texas
	Koren Manning	Tucson	Arizona
	Jacquie Bauer	Tucson	Arizona
	Gavin Dillingham	Houston	Texas
<i>West</i>	Jaime Goldman	Boise	Utah
	Steve Hubble	Boise	Utah
	Ashley Perl	Aspen	Colorado
	Jonathan Koehn	Boulder	Colorado
	Debbie Raphael	San Francisco	California
	Vicki Bennett	Salt Lake City	Utah
	Michael Armstrong	City Scale	Oregon
<i>Canada</i>	Doug Smith	Vancouver	Canada

Appendix C: Demographics of Cities and Municipalities Surveyed

The following chart lists the key demographics of cities and municipalities surveyed: population, racial/ethnic distribution, median household income, percentage of persons in poverty, unemployment rates, percent change in unemployment since January 2020, and change in percent of real GDP for the 2nd Qtr. 2020 by state. Vancouver was excluded due to data consistency concerns.

City/Municipality Surveyed	Total Population ¹	Race/Ethnicity (%) ¹					Median household income ¹	% Person in Poverty ¹	Unemployment Rate, July 2020 ²	Change in Unemployment Rate Since Jan. 2020 ²	% Real GDP Change by State 2 nd QTR. 2020 ³
		White alone	Black or AA alone	Asian alone	Latino	White alone not Latino					
United States	328,239,523	76.3%	13.4%	5.9%	18.5%	60%	\$60,294	10.5%	10.20%	6.20%	-31.40%
Aspen, CO	7,401	89%	3%	4%	9%	84%	\$72,973	7.5%	9.40%	7.80%	-28.1%
Austin, TX	978,908	74%	8%	7%	34%	48%	\$67,763	14.5%	6.80%	7.50%	-29.0%
Boise, ID	228,959	89%	2%	3%	9%	83%	\$56,745	13.5%	5.20%	7.00%	-32.4%
Boston, MA	692,600	53%	25%	10%	20%	45%	\$65,883	20.2%	15.50%	7.20%	-31.6%
Boulder, CO	105,673	87%	1%	6%	10%	80%	\$66,117	21.3%	6.70%	7.80%	-28.1%
Cincinnati, OH	300,357	50%	43%	2%	4%	48%	\$38,542	27.2%	7.60%	5.80%	-33.0%
Columbia, MO	123,195	77%	11%	6%	3%	75%	\$49,277	22.2%	5.10%	7.10%	-31.6%
Columbia, SC	131,674	53%	40%	3%	5%	49%	\$45,663	22.5%	7.80%	7.50%	-32.6%
Dearborn, MI	93,932	91%	3%	2%	3%	88%	\$54,498	28.3%	10.10%	5.80%	-37.6%
Dubuque, IA	57,882	91%	5%	1%	2%	89%	\$52,298	16.0%	7.30%	6.20%	-28.2%
Fayetteville, AR	87,590	79%	7%	3%	9%	77%	\$42,101	23.9%	5.70%	7.30%	-27.9%
Houston, TX	2,320,268	58%	23%	7%	45%	25%	\$51,140	20.6%	9.50%	6.10%	-29.0%
New Orleans, LA	380,144	34%	60%	3%	6%	31%	\$39,576	24.6%	11.90%	5.00%	-31.4%
Oldsmar, FL	15,061	85%	6%	5%	12%	75%	\$59,015	8.7%	9.80%	7.20%	-30.1%
Orlando, FL	275,690	61%	25%	4%	31%	37%	\$48,511	18.2%	15.40%	7.20%	-30.1%
Providence, RI	179,883	54%	16%	6%	43%	34%	\$42,158	26.0%	12.70%	6.10%	-32.4%
Salt Lake City, UT	200,567	73%	2%	5%	22%	65%	\$56,370	17.9%	5.30%	7.60%	-22.4%
San Francisco, CA	881,549	47%	5%	34%	15%	41%	\$104,352	10.9%	11.30%	7.50%	-31.5%
Sarasota, FL	433,742	85%	6%	5%	12%	75%	\$47,884	17.1%	9.50%	7.10%	-30.1%
Tucson, AZ	548,073	72%	5%	3%	43%	45%	\$41,625	23.4%	6.60%	5.70%	-25.3%
Washington, D.C.	705,749	41%	47%	4%	11%	36%	\$82,604	16.8%	7.9%	7.10%	-20.4%

Sources: ¹ US Census Bureau, Quick Facts. 2019. ² US Bureau of Labor Statistics, Metropolitan Area Employment and Unemployment - August 2020; Aspen and Oldsmar Unemployment data by county - Federal Reserve Bank of St. Louis, Economic Research, updated Sept. 30, 2020. ³ US Bureau of Economic Analysis, Gross Domestic Product by State, 2nd QTR. 2020. Bold denotes higher rate than US rate in July 2020.

Appendix D. Survey Methodology

We used a series of open-ended questions and a matrix table survey to explore climate action planning and prioritization, with a focus on equity and economic issues, in local governments during the COVID-19 pandemic. We invited climate leaders from city and municipal governments across North America to participate in our survey between July 6th and August 10th. Of the 82 invitations sent (30 were sent to the SSDN via an internal email), we received 25 responses. 42 percent of the cities that responded included populations with greater than 20% Black/African American and Latino populations. Nineteen of the surveyed cities have a higher percentage of persons in poverty than the national average in 2019 and six cities have a higher unemployment rate than the US unemployment rate in July, 2020 (Appendix C). Four of the surveyed cities are located in states that experienced a bigger drop in real GDP relative to the national average in 2nd Qtr. 2020 (Appendix C). Cities were selected to achieve a broad geographic representation and all of them have an active climate action plan. The city climate leaders interviewed for the survey are working in the fields of sustainability and the environment for their cities and are directors or managers of climate change-related planning. The sample cities include members of the Urban Sustainability Directors Network (USDN), Southern Sustainability Directors Network (SSDN), and C40. The responses are shared in the aggregate, anonymized form.

The survey had two parts: an open question interview and an online, matrix table survey. In total, the survey took approximately 30 minutes to complete. All 25 participants completed the open question portion of the survey. Of the 25 interviewees, 21 completed the “City-Wide Policies” portion of the online survey, and 18 completed the “Municipal Operations” portion. In addition, 30 invitations were sent to members of the Southeast Sustainability Directors Network (SSDN) to complete only the online survey. Of the 30 invitations sent, 4 completed both sections of the online survey.

The open question interview was conducted over the phone or video conference and the responses were recorded on Qualtrics. Participants were asked a total of 8 questions about changes in climate action responses that have taken place since the onset of the COVID-19 pandemic in both the near-term (within the next 18 months) or the long-term (beyond 18 months). The open response questions allowed respondents to review and evaluate their city planning and climate action on a broad basis.

Immediately following the open question interview, participants were emailed an invitation to partake in the second part of the survey, which consisted of an online survey administered on Qualtrics. In the online survey, participants were given two sets of questions regarding climate action policies: the first set was asked in the context of city-wide policies and the second set in the context of municipal operations. In the city-wide policies section, participants were given a list of policies based upon global actions and activities related to 10 topics that had occurred since the onset of the COVID-19 pandemic: energy, equity, food security, health, housing, mobility, telecommuting, transportation, waste, workforce/economy (Appendix A.). Participants were asked to indicate whether these policies will be preserved, initiated, postponed, or eliminated in the next 18 months in their respective city or municipality.

In the second part of the online survey, participants were given a new list of climate action policies relating to 8 topics: buildings, climate, ecosystems, energy, health, infrastructure, transportation, and technology. Participants were asked to indicate the changes in “importance and “likelihood of implementation” of the climate actions for the municipal operations in their respective cities or municipalities in the next 18 months (Appendix A).

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- ⁴ Ibid.



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