New York State Disadvantaged Communities Barriers and Opportunities Report

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Final Report

New York State Energy Research and Development Authority

New York State Department of Environmental Conservation

New York Power Authority

Abstract

New York State's Disadvantaged Communities Barriers and Opportunities Report, required by the Climate Leadership and Community Protection Act (Climate Act), assesses why some communities are disproportionately impacted by climate change and air pollution and have unequal access to clean energy. This report identifies barriers faced by disadvantaged communities in having the opportunity to own and access the goods and services necessary to:

- Make homes energy efficient, weather-proofed, and powered by renewable energy;
- Obtain and utilize clean transportation such as fuel efficient and electric cars, vans, trucks, buses, and bikes, as well as walkable streets and livable neighborhoods; and
- Ensure health and safety in the face of more frequent and more severe weather events driven by climate change.

This report recommends actions for New York State agencies to design climate mitigation and adaption programs through a lens of justice. The recommendations will be incorporated into New York State's Climate Action Council's final scoping plan, paving the way for the benefits of clean energy and a safe and healthy environment for all New Yorkers.

Keywords

Acknowledgments

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Acronyms and Abbreviations

BIPOC	Black, Indigenous, People of Color
CAC	Climate Action Council
CJWG	Climate Justice Working Group
Climate Act	Climate Leadership and Community Protection Act
COAD	Community Organizations Active in Disaster
CSC	Climate Smart Communities (DEC program)
DEC	New York State Department of Energy Conservation
DOH	New York State Department of Health
DOL	New York State Department of Labor
DOT	New York State Department of Transportation
DPS	New York State Department of Public Service
EV	Electric Vehicle
GHG	Greenhouse Gas
HCR	New York State Department of Homes and Community Renewal
HEAP	Home Energy Assistance Program (Federal Program)
HPD	New York City Department of Housing Preservation and Development
NYC	New York City
NYCHA	New York City Housing Authority
NYPA	New York Power Authority
NYS	New York State
NYSERDA	New York State Energy and Research Development Authority
OTDA	New York State Office of Temporary and Disability Assistance
REDC	Regional Economic Development Council
SNAP	Supplemental Nutrition Assistance Program (Federal Program)
WAP	Weatherization Assistance Program (NYSERDA Program)

Summary

The Climate Leadership and Community Protection Act (Climate Act) was signed into law on July 18, 2019. The Climate Act aims to address the rising impacts and inequities of climate change in New York State by setting tangible requirements and goals for reaching economy-wide carbon neutrality and significant renewable energy expansion while expanding benefits and community ownership to disadvantaged communities. This law also requires that the Department of Environmental Conservation (DEC), in cooperation with the New York State Energy Research and Development Authority (NYSERDA) and the New York Power Authority (NYPA), (1) prepare a report on the barriers faced by disadvantaged communities in accessing and owning services and commodities (e.g., renewable energy systems and cooling shelters) relating to climate change mitigation and adaptation as well as (2) identify opportunities to increase access and community ownership. The recommendations from this report will be incorporated, as appropriate, into the Climate Action Council's (CAC) Scoping Plan.

S.1 Report Development

In developing this report, DEC, NYSERDA, and NYPA utilized the services of ILLUME Advising, with support from Industrial Economics (the study team), to assist in data collection and report preparation. The study team conducted several activities to identify critical barriers that will affect access to, and ownership of, certain services and commodities identified in the Climate Act by disadvantaged communities and explored opportunities to break down these barriers. These services and commodities are listed below:

- Distributed renewable energy generation.
- Energy efficiency and weatherization investments.
- Zero-emission and low-emission transportation options.
- Adaptation measures to improve the resilience of homes and local infrastructure to the impacts of climate change, including but not limited to microgrids.
- Other services and infrastructure that can reduce the risks associated with climate-related hazards, including but not limited to:
  - Shelters during flooding events.
  - Medical treatment for asthma and other conditions that could be exacerbated by climate-related events.

The study team engaged State agency staff from the Department of Health (DOH), Department of Public Service (DPS), Department of Transportation (DOT), Department of Labor (DOL), Office of Temporary and Disability Assistance (OTDA), and the Homes and Community Renewal (HCR) to inform the research activities, help recruit residents and organizations to provide feedback, and provide input into the report. Research activities included the following: (1) a secondary research review, including publications from academic institutions, non-governmental organizations, and agencies inside and outside New York State; (2) eight focus groups, engaging 65 individuals who live or work in disadvantaged communities across the State; and (3) two public hearings, as required by the Climate Act, attended by 97 individuals. The study team also solicited written comments from individuals through a public notice, an announcement on the Climate Act website, and recruitment efforts with community organizations, capturing feedback beyond the hearings and focus groups. The study team consulted with the Climate Justice Working Group (CJWG) and shared the research plan at several points, including the list of draft barriers and opportunities. Additionally, the study team reviewed CAC meeting materials to inform the development of the report.

S.2   Barriers

To identify the barriers that affect access and participation in the services and commodities listed above, the study team first drew on the extensive research already completed by academic researchers, agencies in New York State, other states, and other non-governmental organizations. The study team also incorporated insights from focus groups, public hearings, and written comments. Key barrier categories were identified that span across the services and commodity areas highlighted in the Climate Act. They include the following:

- **Physical and Economic Structures and Conditions:** This category encompasses broad economic conditions and historical patterns of inequality that exist in the broader context of all programs and affect access and ownership of infrastructure. "Structures" in this context can include both physical structures (e.g., aging housing stock that requires additional investment to support new technologies), and economic and social structures.
- **Financial and Knowledge Resources and Capacity:** These barriers relate to household, community, and agency capacity, and to resource availability for residents, communities, and agencies. Time represents a critical limitation across all levels of community. On the community and business levels, resource gaps can refer to limited personnel and data systems and access to professional networks, as well as access to different financing options.

- **Perspectives and Information:** Barriers within this category describe community perceptions of agencies and programs, including lack of trust in local and State authorities that, in some cases, has developed over decades. In addition, this category includes knowledge gaps and lack of awareness of programs and resources often due to complex or opaque bureaucratic and administrative structures.
- **Programmatic Design and Implementation:** Programmatic barriers include the various factors in program design and implementation that can limit participation and success, including lack of information to inform program design and goals, complex eligibility requirements, insufficient emphasis on engaging communities in the design process, and limited alignment across agencies and resources.

Specific barriers by service and commodity area are included in section 4.

S.3   Recommendations and Opportunities

To identify opportunities to increase access and ownership of the services and commodities identified in the Climate Act, the study team reviewed programs, services, and strategies found through the secondary research review, feedback from agency staff and the CJWG, CAC meeting materials, and insights from the focus groups, public hearings, and written comments. The study team reviewed these opportunities for key themes and principles to formulate a list of overarching recommendations for State agencies and other organizations offering programs or services to disadvantaged communities.

The study team identified recommendations within three key themes, including (1) ensure processes are inclusive, (2) streamline program access, and (3) address emerging issues. Table S-1 provides an overview of the high-level report recommendations by theme. Full descriptions of the report recommendations are included in section 5.

Table S-1. Recommendations by Theme Area

Theme	
Ensure Processes are Inclusive	1. Co-design programs or projects with and for communities.
	2. Provide meaningful opportunities for public input in government processes and proceedings.
	3. Work across intersecting issues and interests to address needs holistically.
Streamline Program Access	4. Transition to program models that require little to no effort to participate and benefit.
	5. Establish people-centered policies, programs, and funding across local, State, and federal governments.
	6. Find and support resource-constrained local governments.
Address Emerging Issues	7. Mobilize citizen participation and action.
	8. Improve housing conditions and adherence to local building codes.

While this report does not include a comprehensive assessment or review of New York State agency and authority programs, it should be acknowledged that the State has many programs working closely with communities to address the barriers identified. In several cases, State agencies are already incorporating different elements of the report recommendations into their programs. For example, DEC has its own Office of Environmental Justice, which works to build community capacity and engages communities in generating climate solutions. Additional program examples are highlighted in section 5.

S.4   Next Steps

This report and the barriers, recommendations, and opportunities identified within it represent an initial step in the process of ensuring that disadvantaged communities have access to, and community ownership of, the services and commodities needed to mitigate and adapt to climate change. In some instances, significant staff effort will be required to implement the report recommendations. For example, some recommendations may have policy implications that must be addressed or require additional funding and staffing to facilitate program co-design with disadvantaged communities.

As a next step to continue this work, State agencies will assess the recommendations and complete a needs assessment. DEC is committed to accepting feedback from the public on this report at any time. After refining the recommendations with any additional needs and adjustments, information from this report will be presented to the CAC and the recommendations will be included in the final version of its scoping plan. Additional details on next steps are included in section 6.

1   The Vision of the Climate Act

The devastating effects of climate change are evident across New York State. Average temperatures are increasing, along with the frequency of dangerous heat events, particularly in urban areas. Coastal and inland flooding is happening more often. Along the coastline, sea levels are rising. The agricultural growing season is becoming longer, but late frost, floods, drought, and extreme heat threaten crops. Geographic ranges of plant and wildlife species are shifting, while biodiversity is diminishing. Catastrophic weather events are more likely, and their costs to human life and to our built environment are increasing. In short, climate change is already having a profound impact on the communities of New York State. Department of Environmental Conservation's (DEC) August 2021 report Observed and Projected Climate Change in New York State: An Overview notes the following:[1]

- New York State has warmed at an average rate of 0.25°F per decade since 1900.[2] Annual average temperatures have increased in all regions of the State. More recently, warming has accelerated: since 1970, the statewide annual average temperature has risen about 0.6°F per decade, with winter warming exceeding 1.1°F per decade.[3]
- The nationwide trend of increasingly frequent extreme precipitation events has been particularly pronounced in the Northeast, including New York State.[4] The proportion of total annual precipitation falling in the heaviest 1% of events increased by 38% in the Northeast, between the periods 1901–1960 and 1986–2016. More recently, from 1958–2016, this increase was 55%.[5]

These trends are projected to continue and worsen, bringing more frequent flooding to both coastal and inland areas, along with more frequent and more lengthy extreme heat events.

The impacts of climate change will not fall equally across all New Yorkers. A growing body of research over the past decade has highlighted the links between vulnerability to the effects of climate change and persistent disparities in economic opportunity, education, housing, environmental quality, health status, mobility, and health care access and quality as well as by race and ethnicity, gender identity, and socioeconomic status. These intersecting impacts affect populations across the State but are also geographically concentrated in areas that have been historically underserved and marginalized. These areas are characterized by older housing stock, less infrastructure investment, and historic burdens increasing risks and vulnerabilities. These communities often have higher concentrations of non-White racial and ethnic populations as well as populations characterized by lower incomes, education levels, language barriers, immigration status, and greater vulnerability to climate change. These populations are more likely to suffer disproportionately from compound or cascading climate or environmental

hazards. The COVID-19 pandemic both highlighted and exacerbated these disparities, adding urgency to equity-focused efforts across State and local agencies.[6]

To address these intersecting issues, New York State's nation-leading Climate Leadership and Community Protection Act (Climate Act) was signed into law on July 18, 2019. The Climate Act aims to address the rising impacts and inequities of climate change by setting tangible requirements and goals for reaching economy-wide carbon neutrality and significant renewable energy expansion while expanding benefits and community ownership to disadvantaged communities. Among its key provisions, the Climate Act sets requirements to reduce greenhouse gas (GHG) emissions 85% below 1990 levels by 2050, use renewable energy to provide at least 70% of New York State's electricity by 2030, achieve a zero-emission electricity system by 2040, and invest resources to ensure that at least 35% of the benefits of spending, with a goal of 40%, are directed to disadvantaged communities. The Climate Act explicitly centers on the intertwined issues of equity and climate change vulnerability. As part of its findings and declaration, the Legislature noted that:

> Climate change especially heightens the vulnerability of disadvantaged communities, which bear environmental and socioeconomic burdens as well as legacies of racial and ethnic discrimination. Actions undertaken by New York State to mitigate greenhouse gas emissions should prioritize the safety and health of disadvantaged communities, control potential regressive impacts of future climate change mitigation and adaptation policies on these communities and prioritize the allocation of public investments in these areas.

The directives in the Climate Act anticipate a government-wide effort that recognizes the fundamental changes needed across the economy to address climate change vulnerability and equity. Specifically, the Climate Act:

1. **Establishes the New York State Climate Action Council** (CAC), a 22-member committee with representatives from State agencies and authorities, members appointed by the leaders of the Senate and Assembly, and two non-agency expert members appointed by the governor.
2. **Directs the CAC to prepare a scoping plan** that will set out recommendations for attaining the statewide GHG emission limits across all sectors of the economy.
3. **Creates the Climate Justice Working Group** (CJWG) to advise the CAC and establish criteria for identifying disadvantaged communities based on considerations related to public health, environmental hazards, and socioeconomic factors.

In addition, section 6 of the Climate Act requires the development of a report on "barriers to, and opportunities for, community ownership of, services and commodities in disadvantaged communities," which will be submitted to the Governor, the Senate, and the Assembly, and be posted to the DEC website. This report therefore fulfills this requirement.

2 Legislative Basis of the Report

Section 6(1)-(2) of the Climate Act requires that DEC, in cooperation with the New York State Energy and Research Development Authority (NYSERDA) and the New York Power Authority (NYPA), and following two public hearings, develop a "report on barriers to, and opportunities for, community ownership of services and commodities in disadvantaged communities," including:

- Distributed renewable energy generation.
- Energy efficiency and weatherization investments.
- Zero-emission and low-emission transportation options.
- Adaptation measures to improve the resilience of homes and local infrastructure to the impacts of climate change, including but not limited to microgrids.
- Other services and infrastructure that can reduce the risks associated with climate-related hazards, including but not limited to:
  - Shelters and cool rooms during extreme heat events.
  - Shelters during flooding events.
  - Medical treatment for asthma and other conditions that could be exacerbated by climate-related events.

To support development of the report, the study team sought input and feedback from other State agencies throughout the work, as required by the Climate Act, with staff from the Department of Health (DOH), Department of Public Service (DPS), and Department of Transportation (DOT) serving as study advisors. Staff from the Department of Labor (DOL), Office of Temporary and Disability Assistance (OTDA), and Department of Homes and Community Renewal (HCR) were also engaged to provide input. The CJWG was also consulted as barriers and opportunities were identified.

Per section 6(2) of the Climate Act, this report will be submitted to the Governor, the Assembly, and the Senate and posted to the DEC website. In consultation with the CAC, DEC will amend the CAC's Scoping Plan for statewide GHG emission reductions to include recommendations from the report.

3 Report Objectives and Approach

The following sections provide additional background on the overarching objectives of the report, its role within the Climate Act, key operating terms that provide bounds around the scope of the report and its contents, and the data collection process.

3.1 Objectives of the Report

As previously noted, the Climate Act requires this report to identify the "barriers to, and opportunities for, access to or community ownership" of the services and commodities that are key to combating climate change. As stated in the law, this report will "include recommendations on how to increase access" to these services and commodities. The approach for identifying barriers and developing recommendations and opportunities (or tactics), is described further below.

3.1.1 Identifying Barriers

To identify and describe the most significant barriers and difficulties that affect access to and participation in programs and services, the study team first drew on the extensive work already done by academic researchers, agencies in New York State and other states, and non-governmental organizations. This review, with feedback from agency staff and members of the CJWG, culminated in an initial typology of barriers to be further investigated through this study.

In addition, the study team incorporated insights from focus groups, public hearings, written public comments, and input from CAC meeting materials and notes. The result is a refined summary of the suite of barriers that affect access to, and community ownership of, the services and commodities needed to mitigate and adapt to climate change.

3.1.2 Developing Recommendations and Opportunities

The CAC's Scoping Plan will provide recommendations for achieving statewide GHG emission reductions, including regulatory measures. This report identifies the opportunities for accessing or owning the services and commodities (listed in section 2 above) that may be included in the scoping plan to meet GHG emission reduction directives. Opportunities were drawn from secondary research

review, feedback from agency staff and the CJWG, input from CAC meeting presentations and notes, along with discussions held during focus groups, and input received through public hearings and written public comments. The study team assessed these opportunities for key themes and principles to formulate the overarching recommendations.

3.2   Role of the Report in the Climate Act

This report is intended as a standalone resource to inform the implementation of applicable provisions of the CAC's Scoping Plan in disadvantaged communities. Furthermore, the recommendations in this report are to be shared with the Legislature and Governor, and the public. It will be posted on the Climate Act and DEC websites to further New York State's efforts to increase disadvantaged communities' access to and community ownership of services and commodities to mitigate and adapt to climate change.

It is important to highlight that the scoping plan recommends the "what" to do, while this report identifies the "how" to do it. Therefore, the report does not recommend specific programs or policies, such as GHG emission reduction initiatives, or procurement or contracting policies, but rather, guidelines and strategies for designing and delivering the programs and services that will be defined in the scoping plan to disadvantaged communities.

A limitation to this report is its reliance on a finite number of sources for information. Although the report draws on a range of sources, including primary research with community members and organizations, it is recognized that a more comprehensive community and agency engagement process may produce more complete results. Full and effective implementation of the scoping plan will require a broad-based effort to engage residents of disadvantaged communities in program design and identification of program priorities. An expanded effort to identify barriers and opportunities could also help to refine and add to the recommendations and opportunities presented here and may further inform the set of barriers, integrating community and agency-level feedback to reflect more community and agency experiences and perspectives.

3.3   Key Operating Terms

Key terms used in this report, and the interpreted or defined meanings, are summarized below. The study team looked to the Climate Act for definitions where available and worked with agency staff to clarify these terms as needed.

- **Access**: The ability to use and benefit from programs or services offered to mitigate (i.e., reduce GHG emissions) or adapt to the effects of climate change.
- **Co-Design**: Creating programs, projects, or plans with relevant stakeholders (e.g., affected community members, and community organizations or groups) to ensure that the results meet their needs.
- **Community Ownership**: Includes the following interpretations: (1) ownership by individuals or businesses that reside within a disadvantaged community, (2) a collective ownership (like cooperative models) of services or resources by several community members, and/or (3) the result of a decision-making process that originates from within the community, is informed by the community's needs and values, and retains the benefits within the community.
- **Community Members**: People that live or work within disadvantaged communities.
- **Community Organization**: Organizations (typically nonprofits) founded to serve the various needs of people within a local community. May offer services, or programs designed to help or support community members, as well as advocacy in some cases.
- **Community Group**: A collective of people who organize around a specific issue or set of issues but are not bound to an established organization registered with New York State.
- **Disadvantaged Communities:**[7] Defined in the Climate Act to mean "communities that bear burdens of negative public health effects, environmental pollution, impacts of climate change, and possess certain socioeconomic criteria, or comprise high-concentrations of low- and moderate-income households." Concurrent with the creation of this report, and as required by the Climate Act, the CJWG is determining criteria by which to define a disadvantaged community. Additional information is provided in appendix B.
- **Local Government**: Any city, town, village, or county government office or agency.
- **Program:** A local, State, or federal offering with a goal of community improvements or benefits. Often may provide technical or financial assistance.
- **Project or Plan:** An idea or concept that is designed to achieve a particular aim to benefit the community. May result in a program, service, or commodity that is provided to a community. For example, a community-owned solar project, climate adaptation plan, or emergency response plan.
- **Services and Commodities:** Interpreted to mean the programs, offerings, resources, and assets within the five areas listed in section 2 to which New York State wants to increase access to and ownership of by disadvantaged communities. These five services and commodities are further defined in Table 1 below, including examples.

Table 1. Services and Commodities Definitions and Examples

Services and Commodities	Definition	Example Actions or Initiatives
Distributed Renewable Energy Generation	Electricity generated from renewable sources (solar, wind, etc.) near the point of use, as opposed to centralized generation at power plants.	**Individuals or Businesses:** Small hydro or wind installation, installation of solar photovoltaic panels, community solar subscription models. **Municipal or Community-Based**: Community-owned solar or storage, adoption of codes or ordinances for solar-ready new construction.
Energy Efficiency and Weatherization Investments	Optimizing energy use within buildings to reduce generation needs; weatherproofing buildings to protect them from extreme cold and heat, moisture, and other natural elements.	**Individuals or Businesses:** Heat pumps in rental/multifamily housing, healthy homes initiatives; direct installation measures with "energy ambassadors," deep energy retrofits. **Municipal or Community-Based**: Electrification of public housing; increased energy and safety code enforcement.
Zero-emissions and Low-emissions Transportation Options	Transportation options that run completely free of GHG emissions or have low emissions.	**Individuals or Businesses:** Mobility options without a vehicle, e.g., active transportation, public transit, ridesharing. **Municipal or Community-Based:** Increased infrastructure and availability for public transportation systems, such as bus lines, train stops, etc.; electric vehicle (EV) charging stations.
Adaptation Measures to Improve Resilience of Homes and Local Infrastructure	Designing landscapes, infrastructure, buildings, and social systems intentionally to prevent or reduce disruptions related to climate-related weather and extreme events.	**Individuals or Businesses:** Resilience audits for homes or businesses, storm-hardening rental properties, green/natural features, and shade trees on private property. **Municipal or Community-Based:** Upstream flood mitigation, community resilience plans for public infrastructure and buildings, microgrid development, green/natural features and/or shade trees.
Other Services and Infrastructure to Reduce Risks associated with Climate-Related Hazards	Offering services to decrease risks (especially health and safety related) during extreme heat and weather events.	**Individuals or Businesses**: Using community shelters during heat or flooding, installing mini-split heat pumps. **Municipal or Community-Based:** Local emergency planning, offering cooling centers or storm shelters, asthma initiatives or heathy homes initiatives.

3.4   Data Collection Approach and Process

NYSERDA, DEC, and NYPA, along with the study team, performed the following data collection activities to inform the report. These activities were pursued in close collaboration with several other State agencies, including DOH, DPS, DOT, DOL, OTDA, and HCR. Additionally, the study team consulted with the CJWG and the CAC to receive input and feedback on the potential barriers and opportunities.

The research activities are summarized in the list below (see appendix A for more details):

1. **Performed secondary research review** focusing on existing literature, including from academic institutions, non-governmental organizations, and agencies (from within and outside of New York State), in addition to plans and proceedings to identify barriers faced by disadvantaged communities and approaches to address those barriers.

2. **Held eight focus groups with a total of 65 participants** (including one group held in Spanish). Participants were recruited and selected purposefully to ensure representation across the State. Focus group discussions centered on four of the five service and commodity areas, including renewable distributed energy resources, low- or no-emission transportation options, resilience and adaptation, and climate hazards related to health and safety. Since there is enough secondary research on the barriers to accessing energy efficiency and weatherization investments for disadvantaged communities, it was decided to dedicate the focus groups to the other four topics. These discussions explored people's experiences as residents, business owners, or nonprofit or local government staff accessing and participating in public processes and programs, and barriers and opportunities for greater access and ownership.

3. **Facilitated two public hearings attended by 97 individuals** (21 of which were speakers), as required per the Climate Act, and received 26 written public comments. Feedback was received on the barriers faced in accessing or owning the services and commodities highlighted in the legislation, as well as opportunities to break down these barriers.

4 Barriers

The following sections provide a high-level overview of the disparities faced by disadvantaged communities in New York State as well as barriers identified through the research activities of this study.

4.1 Overview

Barriers are obstacles that disadvantaged communities may face in participating in and advancing New York State's efforts under the Climate Act. Obstacles to participation and improvement can be physical (e.g., aging infrastructure and housing stock or vulnerable geography), behavioral, perceptual, cultural, social, or economic, such as financial constraints, ownership patterns, and language and cultural structure.

Barriers can also physically affect movement and access (e.g., to zero emission or low-emission transportation, health care, or shelter during severe weather events), as well as limit effective access to and ownership of the infrastructure needed to mitigate and adapt to climate change, such as renewable energy projects, green infrastructure, and the climate planning process itself. In this vein, many barriers based on historical patterns of decision-making have prevented the social mobility of certain population groups while promoting the social mobility of others, resulting in disproportionate exposure to risks and limited access to mitigation and adaptation services and commodities today. Support of social mobility will be a critical element in addressing barriers and opportunities in disadvantaged communities; without that support, disproportionate exposures and inequitable access are likely to increase.

4.1.1 Categories of Barriers

This report organizes key barriers into four categories of overarching "themes" that align with specific structural conditions routinely faced by disadvantaged communities. The categories of barriers intersect and overlap to some extent, in part because they emerge from interwoven historical patterns of exclusion, segregation, and disinvestment in communities. These patterns have affected the quality of housing, schools, transportation, and electrical infrastructure, and have limited access to capital, financial opportunities, employment, health care, fresh food, and other resources. However, the categories generally group issues around specific program design challenges and priorities and are broadly consistent with categories and topics identified in the literature, providing continuity with other efforts to address equity. These four categories of barriers are described further below:

- **Physical and Economic Structures and Conditions:** This category encompasses the structural challenges that characterize the broader context of all programs and affect access to resources and ownership of infrastructure. "Structures" in this context can include both physical structures (e.g., aging housing stock that requires additional investment to support new technologies) and economic and social structures. For example, the "split incentive" complicates investments in rental properties, because property owners have economic priorities and power that can differ from and conflict with the priorities of renters. Discrepancies between rented and owned housing are directly connected to social inequities. In many cases, these structures reflect the cumulative impact of decades of systematic disparities in public investment and policy priorities.
- **Financial and Knowledge Resources and Capacity:** These barriers relate to household, community, and agency capacity, and to resource availability for residents, communities, and agencies. Time represents a critical limitation across all levels of community. On the community and business levels, resource gaps can refer to limited personnel (time and expertise) and data systems and access to professional networks, as well as access to different financing options. Residents may also face barriers such as lack of credit and access to financial services and resources that could enable investment and participation.
- **Perspectives and Information:** Barriers within this category describe community perceptions of agencies and programs, including lack of trust in local and State authorities that, in some cases, has developed over decades. In addition, this category includes limits to understanding of bureaucratic and administrative structures, awareness of programs and resources, as well as the relative importance of agency programming compared to competing needs and interests. Opaque regulatory processes preventing community participation and feedback to agencies are a primary barrier within this category.
- **Programmatic Design and Implementation:** Programmatic barriers include the various factors in program design and implementation that can limit participation and success, including overly complex bureaucratic procedures, lack of information to inform program design and goals, complex eligibility requirements, insufficient emphasis on designing with communities, and limited alignment across agencies, resources, and geographical areas.

These barriers categories may be useful in identifying the types of policies and actions that could effectively address (and remove) key barriers. In particular, the Programmatic Design and Implementation category presents a slightly different perspective than the other categories, because the challenges in that category reflect the design of programs themselves, rather than factors external to the programs. Examining and addressing the barriers in this category are, therefore, critical to identifying opportunities for addressing obstacles across the other categories.

4.1.2 Barriers Across the Five Service and Commodity Areas

In accordance with the Climate Act's requirements, the study team addressed barriers that disadvantaged communities face in accessing or owning services and commodities highlighted in the legislation. Barriers experienced within each of these five areas are discussed further below.

1. **Distributed renewable energy generation** programs are often limited by barriers related to building ownership. Due to physical and economic factors like aging building stock and infrastructure, buildings in historically underserved and under-resourced communities may need electrical updates or roof repairs before solar can be installed. Renters may not receive any monetary benefits from tax credits and may need to deal with challenges and logistics of installation. For example, programs may not communicate clean energy technology or program benefits in a way that motivates community members, such as community-scale renewable energy projects, which have not typically focused on historically underserved and under-resourced communities.

2. **Energy efficiency, weatherization, and electrification** programs have deployment constraints related to inadequate community infrastructure and household-level challenges. For example, community members may live in old homes and have other more pressing personal issues to overcome before considering energy efficiency, creating a strain on households with already limited resources. Community members' homes may also have structural deficiencies or health and safety issues leading to their deferral and exclusion from energy efficiency and weatherization program participation until structural issues are addressed. Further, split incentives leave landlords with limited motivation to invest in improvements because they will not recoup the investment; therefore, renters do not have the opportunity to improve their residences or experience energy savings themselves. Energy efficiency barriers are well-documented in the literature.[8]

3. **Zero-emission and low-emission transportation** programs may not reach the populations with the most limited access to clean and safe transportation. For example, changing the vehicles that New Yorkers use from running on fossil fuels to cleaner options will improve air quality for everyone, but direct benefits to owners are less likely to affect those in disadvantaged communities, who may be less able to purchase new electric vehicles, or may prefer to use public transportation. This makes designing programs to increase accessibility of low- and zero-emission public transit in disadvantaged communities important.

4. Programs addressing **community adaptation of homes, buildings, and infrastructure** are often less accessible to communities with limited capacity; that is, having the right resources and information available to prioritize and finance improvements. Information on the impacts of climate change and links between climate change and household and community risk is limited and challenging to communicate. The relationship between climate change and individual risks has been difficult to convey to communities. Further, communities attempting to plan for climate change adaptation and resilience may lack the technical skills or tailored technical assistance (including readily available and well-developed solutions), resources and information to assess risk, prioritize, plan, and finance critical infrastructure projects.

5. Programs that address **other services and infrastructure to reduce the risks of climate-related hazards,** such as extreme heat or storms, may also be limited by barriers related to community capacity, as well as insufficient data collection and communication of risks. The challenges of extreme heat and the urban heat island effect are amplified for the elderly, infants, and young children, homeless, mentally ill, drug users, and residents of public housing. Programs may not effectively mitigate health-related climate risks because of a lack of integrated planning and coordination across numerous entities, including healthcare providers and planning authorities in local, State, and federal governments.

4.2   Key Barriers to Access and Ownership

As noted, the study team identified four categories of barriers related to accessing, using, or owning the services and commodities listed in the Climate Act. Table 3 through Table 6 detail barriers within each of the categories and provide examples of how they present within three different levels of community access:

- Individual or household levels.
- Community level (such as local governments).
- Landlord or business level.

Specific service and commodity areas affected are also highlighted in Table 2 through Table 5.[9]

Table 2. Physical and Economic Structures and Conditions

Baseline conditions of physical or economic systems that impede access, use, or ownership of programs or solutions.

Barrier to Access or Community Ownership	Example Barriers: Individual and Household Level	Example Barriers: Community Level (e.g., local agencies)	Example Barriers: Landlord or Business Level	Specific Services and Commodities Affected
Building stock may be old and in disrepair.	Increased cost to upgrade, install, or address more critical priorities (e.g., roof repair).	Variable building conditions can limit program reach to residents.	Increased costs to upgrade or install; Limited financial incentive to upgrade.	RE, Adaptation, EE.
Multifamily/rental structures create split incentives.	Landlords may not invest in upgrades, (e.g., electrification or EV charging). Tenants have limited ability to improve property or accrue savings.	Limited influence with landlords; Limited ability to ensure savings are passed through to tenants.	Landlords have no/limited financial incentive to upgrade if savings are passed through to tenants.	EE, RE, Adaptation (buildings).
Products/services available may not match community needs.	Products may not align with household financial priorities. New technologies may not be practical investments (e.g., storage, new EVs).	Variable community needs and conditions can limit program reach (e.g., rooftop solar or weatherization). Market-ready products may not be local priority (e.g., electric vehicle supply equipment with limited EV drivers).	Market-ready products may not be suited to application (e.g., EV delivery vehicles).	All services and commodities.
Physical infrastructure may be insufficient.	Limited access to services (e.g., transportation). Limited access to transportation based on disabilities, gender, and safety. Limited infrastructural and community resilience to damaging events. Limited or outdated infrastructure at building or community level (e.g., drainage) makes adaptation difficult.	High costs to upgrade outdated infrastructure, add services (e.g., cooling and evacuation centers, improved drainage).	Limited or outdated physical infrastructure increases costs, reduces ability to upgrade/adapt. Local businesses have limited resources to meet higher costs, improve operations.	All services and commodities.
Data/IT infrastructure limitations can affect community access.	Lack of internet access, Wi-Fi, and hardware. Limited information/technology access.	Limited community data; Limits of trained staff; Limited IT resources; Impeded planning and communications.	Limited community data or IT infrastructure (e.g., broadband) increases operating costs, limits resources for other investments.	All services and commodities, especially RE, Transportation.

Table 3. Financial and Knowledge Resources and Capacity Barriers

Insufficient resources, including financial resources, time, staffing or individuals on the household, agency, organization, or municipal level.

Barrier to Access or Community Ownership	Example Barriers: Individual and Household Level	Example Barriers: Community Level	Example Barriers: Landlord or Business Level	Specific Services and Commodities Affected
Households and community members may lack access to capital or financing limits access.	Low/limited incomes. Unbanked populations with limited access to credit or cashless options.	Limited municipal budgets. Limited access to credit.	Limited small business capital. Limited access to credit or resources to improve credit access.	All services and commodities.
Households and community members may lack time and skills to find and access programs.	Competing priorities creating limited time to attend meetings or learn of new options. Not enough time to find/plan/manage project and submit applications.	Not enough time to find/plan/manage projects and programs. Competing goals with deadlines for funding.	Limited finances, networks. Limited capacity for ancillary projects. No trained staff to plan or pursue projects or programs.	All services and commodities.
Lack of (or lack of access to) information networks (e.g., personal, or professional networks) can reduce ability to participate.	Limited informal professional resources/networks to provide information about risk, benefits. Limited knowledge resources, professional contacts.	Limited professional resources/networks to access knowledge, support, strategic and practical input.	Limited capacity and networks professional resources/networks to draw on for creative solutions that aren't "sales."	All services and commodities.
Communities have limited programmatic and information capacity.	N/A	Limited data about population needs. Local social and health systems with limited planning data and capacity.	Limited information about workforce availability and options related to program or project implementation.	All services and commodities.
Communities and businesses face workforce constraints.	Limited training, mobility, access to jobs (e.g., court-involved workers that may have a record).	Limited training capacity and budget.	Limited workforce/contractor pool due to lack of training opportunities, job access (e.g., court-involved workers). Limited training capacity, need for specific skill sets.	All services and commodities.

Table 4. Perspectives and Information Barriers

Limited information, competing priorities and preferences, or lived experiences, including historical patterns of interaction that have eroded trust and impede awareness of and access to programs or services.

Barrier to Access or Community Ownership	Example Barriers: Individual and Household Level	Example Barriers: Community Level	Example Barriers: Landlord or Business Level	Specific Services and Commodities Affected
Communities may be unaware or uncertain of risks or needs.	Evolving information on health effects and impacts of climate risks may create uncertainty. Health and risk information may not be accessible or easy to understand. Limited information on impacts of climate change on individual health risks.	Evolving information on health effects and impacts of climate risks for households and communities. Limited documented information about planning, infrastructure priorities for addressing climate vulnerabilities.	Evolving information on health effects and impacts of climate risks on businesses, markets, and communities. Lack of industry and business leadership on addressing climate and health risks to workers and communities.	All services and commodities, focus on adaptation, and health and safety.
Communities may have a lack of trust in the program or service provider.	Negative historical patterns of interaction with utilities, government agencies, landlords, potentially due to immigrant status or identity. Unwillingness to grant access to homes for improvement or services. Concern about "unproven" new technologies.	Negative historical patterns of interaction with utilities, government agencies, landlords. Complex and negative interactions with State and private sector.	Negative historical patterns of interaction with utilities, government agencies, and public.	All services and commodities, focus on EE, adaptation, and health and safety.
Communities may perceive limited benefits or value of programs.	Ineffective communication of value and lack of focus on community priorities. Competing priorities and lack of clear benefit information limit interest, including "not for me" perspective. Concern about "unproven" new technologies.	Competing priorities and lack of clear benefit information limit interest. Lack of focus on community priorities. Competing funding sources and programs may affect prioritization. Concern about "unproven" new technologies.	Competing priorities and lack of clear benefit information limit interest; payback period too long. Ineffective communication of value, limited trust in new technologies.	All services and commodities.

Table 5. Programmatic Design and Implementation Barriers

Data and knowledge gaps related to lack of alignment between agencies and program design constraints.

Barrier to Access or Community Ownership	Example Barriers: Individual and Household Level	Example Barriers: Community Level	Example Barriers: Landlord or Business Level	Specific Services and Commodities Affected
Lack of baseline or benchmarking and impact assessment data.	Misaligned or conflicting program offerings, limited access due to changes in households or missing information. Lack of information about where needs are across programs and how well programs would meet them.	Misaligned or conflicting program offerings, limited access to meet needs, limited community application. Lack of information about where needs are across programs and how well programs would meet them.	Programs not consistent with priorities. Lack of information about business priorities, processes, and needs.	All services and commodities, focus on EE.
Program not well designed for community members.	Limited focus to date on climate-vulnerable and heat-vulnerable areas. Historically focused on single-family homes and homeowners with limited offerings for multifamily renters.	Limited focus to date on climate-vulnerable and heat-vulnerable areas and programming. Limited focus on multifamily renters.	Limited attention on climate-vulnerable and heat-vulnerable areas, limited options for C&I.	All services and commodities.
Program eligibility constraints and application requirements may eliminate certain communities.	Programs requiring home ownership or new technology purchase. Income eligibility varies and difficult to understand/navigate, limited access for renters, technologies require capital.	Programs requiring home ownership or new technology purchase. Multiple programs difficult to optimize, variable eligibility. Competitive grant structures favor communities and organizations with grant-writing capacity and experience.	Programs requiring building ownership or new technology purchase. Loan-based programs not accessible to small, cash-based businesses. Application requirements favor firms with resources.	All services and commodities.
Program resources may be insufficient or inconsistent.	Program scope, timeframes too limited to address complex issues and widespread need.	Program scope, timeframes too limited to address complex issues and widespread need; short time horizons for funding do not align with planning.	Program scope, timeframes too limited to address business financing cycles and project scopes.	All services and commodities.
Programs may lack sufficient coordination.	Burdensome applications, conflicting eligibility. Lack of coordination across governments (e.g., city or town coordination with county or State) may cause confusion.	Burdensome applications, conflicting eligibility; local alignment of programs requires effort, difficult to optimize, schedules difficult to implement. Some agencies may lack authority to participate at community level.	Burdensome applications, conflicting eligibility.	All services and commodities.
Program outreach may be insufficient or misaligned.	Lack of awareness of programs and services because information is not provided in the best channel, source, language, or format.	Communities that could benefit from programs/services aren't aware; programs have difficulty communicating to residents.	Lack of awareness of programs and services because information is not provided in the best channel, source, language, or format.	All services and commodities.

5 Recommendations and Opportunities Overview

This section provides an overview of the report recommendations, including describing the structure of recommendations and opportunities.

5.1 Overview and Background

This section details recommendations and opportunities identified through the activities described in the report. Note that the recommendations do not address the significant and important work that will be necessary to put them into practice, which is further discussed in section 6. Some examples of remaining work and how they relate to the recommendations are highlighted below:

- **Identifying and addressing policy implications**. Some recommendations may have larger policy repercussions. For example, integrating communities in program design is an endeavor that takes additional time and money and could imply substantial changes to established processes.
- **Finding and gaining support for additional funding and staffing**. Several recommendations require local and State agencies to take a more active role within communities during planning processes and to provide support to identify and address climate hazards. In many cases, agencies or other organizations may not have the requisite budget, authority, skills, or staffing to do this.
- **Conducting a full-stakeholder review and feasibility assessment**. Most, if not all, recommendations require numerous parties to collaborate and determine a path forward to implementation. Implementing agencies must establish organizational structures, develop new and existing relationships, and build trust to facilitate this stakeholder collaboration.

The study team also recognizes that some of the recommendations identified may already be in practice within certain communities or programs and has included some examples.

5.2 Recommendations

The study team makes eight high-level recommendations that are organized under three key themes:

- Recommendation Theme 1: Ensure processes are inclusive.
- Recommendation Theme 2: Streamline program access.
- Recommendation Theme 3: Address emerging issues.

For this report, a "recommendation" is considered a high-level principle to increase access and ownership in disadvantaged communities, while an "opportunity" is a strategy or tactic that supports the implementation of the related recommendation. Table 6 below summarizes these recommendations, as well as the opportunities identified to implement them.

Table 6. Summary of Recommendations and Opportunities

Recommendation	Related Opportunities
Recommendation Theme 1: Ensure Processes are Inclusive	
1. Co-design programs or projects with and for communities.	1a. Staff agencies and funding programs to implement co-design processes with communities. 1b. Build trust by dedicating time and resources to develop relationships with communities. 1c. Co-design with and for the most vulnerable New Yorkers. 1d. Develop wealth-building and asset-building options or pathways.
2. Provide meaningful opportunities for public input in government processes and proceedings.	2a. Revisit public outreach and engagement protocols and practices with communities to bring more people into conversations earlier and show them how their input is being addressed. 2b. Track and assess participation in public processes. 2c. Continue seeking and supporting community groups and representatives in public processes.
3. Work across intersecting challenges and interests to address needs holistically.	3a. Recognize and address intersecting barriers in accessing programs and services. 3b. Describe the benefits of clean energy, transportation, environmental and adaptation projects on several dimensions, with cultural awareness. 3c. Actively seek and recruit community partners for communication and program or service facilitation needs. 3d. Expand intermunicipal and regional collaboration. 3e. Include a range of stakeholders with different roles and areas of expertise. 3f. Update codes, rules, and policies that currently limit or prevent climate change solutions. 3g. Recognize and address the compounded effects of systemic racism and environmental and climate injustice within climate plans.
Recommendation Theme 2: Streamline Program Access	
4. Transition to program models that require little or no effort to participate and benefit.	4a. Automatically enroll people into programs where possible. 4b. Automatically refer eligible people and businesses between programs, with follow-through. 4c. Directly award grants to communities instead of requiring lengthy and competitive application processes, to the extent consistent with relevant legal requirements.
5. Establish people-centered policies, programs, and funding across local, State, and federal governments.	5a. Expand eligibility where feasible to maximize impact and coordinate between programs. 5b. Provide clearer participation roadmaps and pathways for community members. 5c. Offer more direct access to resources, information, data, and knowledge. 5d. Assess opportunities to merge, combine, or closely coordinate related programs across State agencies, to the extent consistent with legal requirements. 5e. Review and reemphasize the State's role as the connector between federal and local programs and services and across different market actors.

Table 6 continued

Recommendation	Related Opportunities
6. Find and support resource-constrained local governments.	6a. Identify the most vulnerable communities and craft a set of services that are most frequently needed. 6b. Provide digestible data and information to help local governments identify climate risks and potential adaptation strategies. 6c. Bring education and training to local governments so they are prepared to receive funding and understand what resources are available.
Recommendation Theme 3: Address Emerging Issues	
7. Mobilize citizen participation and action.	7a. Develop channels and tools for people to report local concerns. 7b. Support people and neighborhoods in providing feedback about climate issues that affect them. 7c. Facilitate ways for community members to contact and support each other in emergencies. 7d. Find and support local champions.
8. Improve housing conditions and adherence to local building codes.	8a. Address building integrity from a health and safety perspective. 8b. Continue to improve housing and energy upgrade incentives and financing for building owners serving disadvantaged community members. 8c. Address the possibility of climate-related displacement or relocation early, and work with communities to develop questions and options. 8d. Institute anti-displacement, relocation, or managed retreat policy that considers social, cultural, and historical context in addition to infrastructure and natural environment. 8e. Increase building health and safety and energy code enforcement efforts and partnerships. 8f. Bring energy code education and training to frontline contractors.

The following sections further describe the recommendations and opportunities. Recommendations are organized by the three key themes described above: ensure processes are inclusive, streamline program access, and address emerging issues. Opportunities (or tactics) are grouped according to the target audiences, differentiating among opportunities to work with individuals, households, or businesses; to increase access and ownership; and opportunities to work at the community level with community organizations, groups, or local government to increase access and ownership. Where available, examples of the opportunities are provided, identifying the relevant service or commodity area.[10,11]

In most cases the recommendations do not name a specific responsible party or actor, as the same opportunities may exist at the State, regional and local levels, and could be implemented by government entities and nonprofits alike. Per above, a next step toward implementing this report may be a baseline or gap analysis to understand current actions and processes, and the agencies or other entities that may be best positioned to implement the recommendations.

Recommendation Theme 1: Ensure Processes are Inclusive

> *"Community members and leaders need to be involved in this discussion; government agencies can't be left to their own silos to come up with these plans, they are not attuned to the real needs of communities and have blind spots. A comprehensive plan that's created with the input of community members and [organizations] that represent front line communities [is what's needed]."*
>
> *- Focus Group Participant*

Recommendation 1: Co-Design Programs or Projects *with* and *for* Communities

Involve community members and relevant community stakeholders as programs or projects are designed, inviting participation at an early stage in the process to ensure that the outcomes reflect the concerns and needs of the community. The reason to encourage participation of community members is that residents of disadvantaged communities are often excluded from planning and other processes that impact their communities. Rectifying these historical harms requires transforming typical government processes and inviting participation from stakeholders and residents who can fully explore the needs, concerns, resources, and attitudes of a community. Early participation can also unlock new synergies for effective and impactful program delivery.

Opportunities to work with individuals, households, or businesses:

1a. Staff agencies and fund programs to implement co-design processes with communities.

- Dedicate agency staff and funding to help residents of communities organize (or work with trusted community organizations) to ensure they have a role in the co-design process and that their priorities and needs are reflected in the programs or projects that impact them.
- Hire a diverse and bilingual staff who can engage with community members based on shared experiences in the language they prefer and ensure that non-English speaking individuals or those with limited English proficiency can participate in the co-design process.
- Ensure that agencies develop capacities to support co-design processes with multi-disciplinary research and inquiry and diverse forms of expertise.
- Continue developing emergency response plans with input from public housing residents.
- Provide fair compensation for organizations and individuals to contribute to the co-design process.

Effectively collaborating with communities will require new and inclusive processes. Such changes will require staff time and effort and may require additional time to build relationships with community stakeholders. Dedicated funding streams will assure these programs benefit from consistent support.

Example Program: New York State has established through Executive Order a Language Access Policy that directs each state agency that provides direct public services to offer interpretation services to individuals in their primary language. These agencies are also required to translate vital documents, including public documents such as forms, in the ten most common non-English language spoken by Limited English Proficiency individuals in the State of New York. The agencies are also required to appoint a Language Access Coordinator to publish a Language Access Plan. (Services or Commodity Area: All).

Example Project: NYSERDA is establishing procurement mechanisms for compensating community organizations to participate in program planning and co-design. An Energy Equity Collaborative is also in development to identify opportunities for program innovation and co-design. (Service or Commodity Area: EE, RE).

Example Program: The New York State Lake Ontario Resiliency and Economic Development Initiative is a funding program that was designed with community and local government involvement through several months of active engagement. All projects were identified by community members and local government representatives and prioritized by regional planning committees comprised of local government and State agency representatives. (Service or Commodity Area: Adaptation, All).

1b. Build trust by dedicating time and resources to develop relationships with communities.

- Find local community groups or organizations early in the process and work with them to build understanding of the experiences, needs, concerns, and points of pride within the community.
- Provide State and local government staff with education on environmental justice issues and approaches.
- Partner with local champions for project planning and demonstrate a commitment to listen to local experts by acting on their input. Doing so will require involvement early enough that local input can shape the outcome.

Building trust with communities that have been marginalized is a critical first step in working with communities to co-design solutions. During focus groups, community organizations working in historically disadvantaged areas shared their skepticism about the commitment that State or local agencies would make given generations of neglect and discrimination. They also pointed out that many of the topics covered were not new but had been discussed in other forums before. In this context, State agencies must work to build trust with community stakeholders and ensure that when working together, agencies respect and build from the knowledge and experiences of local communities in tangible actions.

Example Program: NYSERDA's Regional Clean Energy Hubs program will serve as extensions of NYSERDA for building relationships, supporting outreach and engagement of residents around needs, barriers, and opportunities for improving access to clean energy programs. (Service or Commodity Area: EE, RE).

Example Program: NYSERDA's NY-Sun program partnered with the New York City Environmental Justice Alliance to receive input on the Inclusive Community Solar Adder program and incorporated this input into the program. (Service or Commodity Area: RE).

Example Program: DEC's Hudson River Estuary program helps communities anticipate and manage climate risks through several longstanding assistance programs, including the Climate-Adaptive Design Studio and place-based waterfront flooding task forces. (Service or Commodity Area: Adaptation).

1c. Co-design with and for the most vulnerable New Yorkers.

- Design programs and create plans intentionally for different types of disadvantaged communities, considering the specific barriers and opportunities they face (e.g., renters, people without cars, etc.).
- Actively collaborate with community groups and residents from the start when designing programs or projects (rather than retrofitting an existing program) to enable community input and ensure that programs leverage and build community resources. Note that within this, agencies must also balance solicitation rules and requirements to ensure a fair process.
- Learn about the community member experience through approaches like design thinking or journey mapping that require designers to empathize with community members' experiences.

Too often, programs are designed for groups or communities that are considered the "norm" or the median (e.g., homeowners), and then adapted to fit communities and households who do not fit within that normative frame. However, to take the example of homeownership, the needs of renters are quite different from those of homeowners, just as the needs of transit riders are different from people with personal vehicles.

Example Suggestion: Focus group participants highlighted gaps in their day-to-day public transit journeys, for example—noting that regular trips to get groceries or commute to work/school, as well as urgent needs such as medical or other essential services, could take hours of planning. Participants also emphasized bringing dignity to the transit experience

> *"HEAP benefits are available in the winter to help people with heating bills, but there is no commensurate program to help people with AC bills in the summer. Not that I want everyone cranking AC, but if there aren't other investments in cooling (like shade trees or public cooling areas) then what are the options?"*
>
> *- Focus Group Participant*

by ensuring that transit facilities and stops are clean, well-maintained, and well-lit, as well as including more amenities to stay warm or cool, safe, and comfortable while waiting for transit (e.g., roofs on bus shelters, benches, heated bus hutches, and lockers). (Service or Commodity Area: Transportation).

Example Program: NYSERDA worked with a group of 30 community organizations across the State to co-design the Regional Clean Energy Hubs program offering to ensure the program met their needs. (Service or Commodity Area: EE, RE).

Example Program: The DEC Climate Smart Communities (CSC) Grant program provides opportunities for local governments to apply for funding to implement or upgrade cooling centers and cooling sites in their jurisdictions. Local governments are encouraged to assess existing facilities that could serve as cooling centers in their communities and ensure accessibility to vulnerable populations like the elderly and those without vehicles. (Service or Commodity Area: Health and Safety).

Example Project: DEC conducted a multi-year, state-of-the-art South End Air Quality Study. Conducted in Albany's South End neighborhood, an Environmental Justice community, the study collected air quality data on the ground to advance solutions to address air pollution in the area. The study was designed and executed in partnership with residents, who also participated in the collection of air quality data, and additional State and local agencies, and serves as a model for other communities. (Service or Commodity Area: Health and Safety).

Example Project: NYSERDA partnered with Tompkins Consolidated Area Transit (TCAT) and a diverse project team to develop and demonstrate a flexible, on-demand transit service for disadvantaged communities in Tompkins County. TCAT, along with Way2Go-Cornell Cooperative Extension, developed educational materials, conducted rider surveys, and hosted workshops with community members to identify transportation needs directly from members of the public, especially in rural, low-income communities. (Service or Commodity Area: Transportation).

> *One CJWG member shared a vision for community ownership reaching beyond energy benefits. For community solar or heat pumps, community members should:*
> - *Build the system with their workforce (with training).*
> - *Maintain the systems—Be the technicians and subscription managers.*
> - *Sign up for benefits—Have 150–300 community members subscribe.*
> - *Give back revenue from project as community dividends or reinvestment.*
> *"It's a way to grow community wealth and bring community control of the resources."*

1d. Develop wealth-building and asset-building options or pathways.

- Collaborate with community representatives, State, and energy programs to identify and develop wealth-building and asset-building pathways to clean energy, healthy homes, and clean transportation.
- Offer non-traditional options where financing is necessary (e.g., forgivable loans where revenues can be reinvested in community, on-bill financing, micro-lending, and options for people without credit history).

The wealth gap in the United States has been created over generations. Histories of redlining, employment and housing discrimination, and other instances of structural racism have resulted in disparities in household and community wealth, even setting aside gaps in individual household income. Many programs or services that offer the highest savings (e.g., energy or bill savings; fuel cost savings) require substantial investment and were designed for homeowners.

Example Suggestion: The New York City Community Energy Co-Op works with communities to develop and implement community-owned solar projects. Community-owned solar projects can build wealth within the community by saving money on members' energy bills that can then be put to other uses, along with other potential benefits (examples highlighted in sidebar). (Service or Commodity Area: RE).

Example Suggestion: Provide arrears forgiveness for low- to moderate-income households to clear the way for wealth development instead of accumulation of additional debt. (Service or Commodity Area: EE).

Recommendation 2: Provide Meaningful Opportunities for Public Input in Government Processes and Proceedings

Reassess and revise ways that State and local government agencies reach out to disadvantaged communities during official public input processes to increase engagement and accessibility. Increase accountability so the public understands how their input is being addressed. Revising ways to reach out to disadvantaged communities and increasing accountability is important because standard public outreach and engagement strategies are more likely to reach those organizations and individuals who are already aware of and involved in an issue. These strategies may not account for the additional barriers, such as time constraints and lack of trust for public processes, that disadvantaged communities face.

Opportunities to work with individuals, households, or businesses:

2a. Revisit public outreach and engagement protocols and practices with communities to bring more people into conversations earlier and show them how their input is being addressed.

Develop or reassess public engagement policies State and local) to reach people across numerous channels, in their preferred languages, and with earlier notices about public input to allow more time for community networks to spread the news. Structure public engagement opportunities to enable meaningful and leveled participation. Where possible and appropriate, explore opportunities to share control of engagement processes and outcomes with the communities. This includes increasing outreach through community organization partners, and where appropriate, compensating them.

> *Jemez Principles for Democratic Organizing*
>
> *1. Be inclusive.*
> *2. Emphasis on bottom-up organizing.*
> *3. Let people speak for themselves.*
> *4. Work together in solidarity and mutuality.*
> *5. Build just relationships among members.*
> *6. Commitment to self-transformation.*
>
> *Developed at a meeting of the Southwest Network for Environmental and Economic Justice (SNEEJ), Jemez, New Mexico, 1996.*

- Build environmental and social justice practices into public input and planning, such as the Jemez Principles for Democratic Organizing or other community engagement strategies (see appendix C).
- Dedicate local agency staff (e.g., planning departments) to help individuals and community groups learn about and participate in permits, planning, or budget decisions that will affect them, including one-on-one education or assistance about a project proposal and/or process. Where local agency staff are not located, identify an agency community liaison or ombudsman.
- Improve accessibility of public projects and input materials by considering a range of education levels, cultural contexts, and understanding of the planning process. For example, use visuals or diagrams where possible. Explain where a project is in the process and how public input matters (i.e., what might it change) so people see a reason to try. Simplify the public participation process, provide clear instructions for how to participate, provide relevant documents and other information readily, early, and transparently, and provide several ways for a person to participate.
- Build in State and local government accountability by showing communities how their input is used to address their needs.

In focus groups and public input, some community members felt that they did not hear about opportunities early enough, or at all. Sometimes, the process seemed too far along to have an impact (including materials that looked too official to believe they could change). Some voiced frustration that their individual voices were not heard.

Example Suggestion: As part of its Equitable Energy Efficiency Proceeding (E3), the State of Connecticut summarized and published public comments received for each goal and addressed how the suggestions were incorporated into the agency decision. (Service or Commodity Area: EE).

Example Program: Tompkins County offers a public participation toolkit on its website, offering resources and information about how to engage the public in important projects and decisions. (Service or Commodity Area: All).

Example Program: NYSERDA's Low- to Moderate-Income Portfolio Implementation Plan development process included multiple stakeholder engagement events to understand community needs and concerns. The process included a review of all stakeholder input received and responses to input. (Service or Commodity Area: EE).

Example Project: NYSERDA worked with MTA to demonstrate a collaborative transportation planning software tool that helped streamline the transit authority's ongoing Bus Network Redesign process at the time. By hosting an interactive map online, the MTA was able to solicit public feedback and share information on the network redesign in a more easily accessible approach than its traditional channels. Furthermore, the cloud-based tool allowed MTA to quickly adapt bus service to COVID-related overnight subway shutdowns, helping provide a critical transit service for essential workers. (Service or Commodity Area: Transportation).

> *Example Accessibility Goals or Metrics:*
> - *Outreach channels.*
> - *Community-based partners for outreach.*
> - *Notification lead time.*
> - *Meeting times-of-day.*
> - *Language (translation or interpretation).*
> - *Legibility (plain language).*
> - *Cultural, racial, and ethnic relevance.*
> - *Physically accessibility to meetings*
> - *Transparency and context.*
> - *Incentives or compensation.*

2b. Track and assess participation in public processes.

- Determine what information local and State agencies can legally and systematically capture about participants to assess whether community members are at the table. Example characteristics could include income level (or receipt of income-eligible public assistance), age range, race/ethnicity, disability status, location (e.g., neighborhood), renter status, or residence in public or subsidized housing.
- Systematically track outreach accessibility (see sidebar), and who is participating and contributing to public input (e.g., by location or demographics), to assess what strategies or partnerships may work best, and who is missing. If local or State governments see gaps in who is participating, they can find community organizations representing that constituency to co-design improvements.

> *"The most important thing is representation and keeping the lines of communication open. People like us are not represented in the rooms where these decisions are being made. We need people who can voice our problems and the needs of our communities."*
>
> *- Focus Group Participant*

- Develop access and participation goals and metrics for planning and program design processes, and where possible, integrate these procedural metrics into policies or evaluation (e.g., assessment of Climate Act implementation).

Baseline information on who is participating can help identify opportunities to improve outreach and public input processes, and measure progress. Procedural metrics, such as accessibility (physical, language, or educational), can help to inform notification timelines and channels, and participation.

Example Program: The New York Metropolitan Transportation Council adopted a Public Involvement Plan in 2019, which identified three key goals: (1) provide a robust, creative, and inclusive outreach process for all populations within the region to engage in meaningful discussions; (2) educate the public so they can purposefully participate; and (3) evaluate current and ongoing public involvement activities on a periodic basis to identify successes and areas for improvement. (Service or Commodity Area: Transportation).

Opportunities to work at the community level (via community organizations, groups, or local government):

2c. Continue seeking out and supporting community groups and representatives in public processes.

- Actively find and reach out to neighborhood and community organizations to weigh in on climate, energy, housing, transportation, and health issues (without limiting invitations to specific sectors, per recommendation 3).
- Provide compensation for community organizations to help with outreach and facilitating community member participation in public processes (see recommendation 1a. regarding fair compensation).
- Provide financial and technical support to nonprofit and community organizations to build capacity (e.g., information or knowledge, staffing resources, etc.) so they can participate in public processes.

As one CJWG member noted, due to time, resource, educational, and trust barriers, it is not reasonable to expect everyone to participate as individuals; nor is it reasonable to expect everyone to participate directly, but grassroots organizations are well-suited to provide input. However, it takes staff time and resources to stay informed about the status and input opportunities of local projects as well as to post or share information. One way to respect (and facilitate) grassroots organizational help is to provide adequate compensation.

> *"[Save the Sound] held a forum to talk about intersecting issues— resiliency, transportation options (lack thereof), and water quality. Speakers from different organizations came, and it raised awareness. [They] had meetings with a State Senator."*
>
> *- Focus Group Participant*

Example Program: DEC offers Environmental Justice Capacity Building Grants to help community organizations build administrative, technical, and programmatic capacity to support their efforts to serve low-income populations, communities of color, and underserved communities across the State. (Service or Commodity Area: Adaptation).

Example Program: The Clean Transportation NY Plan, coordinated by DEC, guides the spending of New York State's allocation of Volkswagen Settlement funds. DEC held a series of public informational meetings, established a dedicated webpage to accept stakeholder suggestions and potential projects, and incorporated the plan's environmental justice commitments by directing incentives in or near disadvantaged communities. Community input was used to design programs that replace older diesel vehicles and equipment with new, cleaner vehicles. Several programs focus on providing New York State's vehicle and equipment electrification efforts (e.g., transit buses, school buses, cargo handling equipment) to disadvantaged communities. The NYC Clean Trucks Program limits eligibility of its truck replacements to certain industrial zones in the city based on environmental justice considerations. (Service or Commodity Area: Transportation).

Recommendation 3: Work Across Intersecting Issues and Interests to Address Needs Holistically

Find the intersections across different programs and projects to strengthen community support and increase chances for funding. The solutions that people and organizations seek are rarely one dimensional. Regular medical appointments require navigating public transportation connections, and health insurance as well as transportation or housing assistance. Flooding in one community may be caused or exacerbated by development or infrastructure in another town. Large-scale and community-scale energy projects have the potential to impact communities beyond their energy-related benefits. For example, these projects may include other benefits like local job

creation, revitalized abandoned lots, or projects coupled with agricultural land. Finding intersections across interests and issues is not only necessary for problem-solving, but will help strengthen projects and support, and increase chances for funding.

Opportunities to work with individuals, households, or businesses:

3a. Recognize and address intersecting barriers in accessing programs and services.

- Identify the cross-sector barriers people face accessing and participating in clean energy, housing, transportation, health, or climate programs through understanding community member experience (per recommendation 1c).
- Create bridges between sector or program areas to connect participation paths and overcome barriers.

Program participation often drops off when people encounter barriers "outside of" the program, and when programs do not facilitate solving problems outside their direct areas of scope or expertise.

Example Program: The New York State Healthy Homes Value-Based Payment Pilot, delivered by DOH and NYSERDA, aims to address several intersecting health-related and energy issues in the home, including energy efficiency and weatherization, environmental trigger reduction, and home injury prevention services. In-home visits are performed by a registered nurse, with community health worker support throughout the process. (Service or Commodity Area: EE, Health and Safety).

Example Program: NYPA is participating in a National Indoor Food Production Collaborative to help electric utilities understand the impact of agricultural industry electrification within communities. As part of the project, NYPA is partnering with community organizations to place large indoor food systems in disadvantaged communities, along with providing education about sustainability, climate change, and food justice issues. At the end of the program, the container remains with the community organization, enhancing their ability to grow food locally and year-round, and providing crop protection from extreme weather events. (Service or Commodity Area: Adaptation, Health and Safety).

Example Program: The Hudson River Flood Resilience Network is supported by DEC's Hudson River Estuary Program, Cornell University's Water Resources Institute, Scenic Hudson and the Consensus Building Institute. The Network is a group of Hudson riverfront communities that work together to address current and future flood risks. (Service or Commodity Area: Adaptation).

3b. Describe the benefits of clean energy, transportation, and environmental and adaptation projects on several dimensions, with cultural awareness.

- Ask and listen to community concerns outside of the core project area (e.g., energy capacity or emission reductions).
- Then, explain or quantify project benefits based on the other dimensions identified by the community (e.g., education, jobs, or access to jobs; outage recovery time; air quality and health; housing or energy costs).
- Learn if and how concerns or benefits matter for underserved racial, ethnic, linguistic, or cultural groups.
- Craft community benefits agreements that address education, workforce, environmental, or economic concerns.

> *"In Geneva, we have been able to layer urban forestry, parks, green roofs, etc. with our food justice and housing justice initiatives to reclaim abandoned lots for infill gardens, fruit trees, native plantings."*
>
> *-Focus Group Participant*

Single-issue projects may not get broad enough attention or support for budget allocations or funding, and successful projects often address numerous interests. Additionally, single-dimension community benefit agreements (e.g., revenue) may not address workforce or training concerns.

Example Program: In press releases and other communications about clean energy projects or other funding opportunities, DPS and other State agencies often associate energy saved in terms of the number of homes heated or number of cars off the road. Other benefits are also communicated, like workforce development efforts and jobs created. (Service or Commodity Area: EE, RE).

Example Program: NYSERDA's New York Clean Transportation Prizes program offered the Clean Neighborhoods Challenge, which makes up to three $10 million grand prizes available for innovative projects that address local air pollution reduction at scale in disadvantaged communities. Projects must align with community needs and improve the quality of life for residents in communities. (Service or Commodity Area: Transportation).

Opportunities to work at the community level (via community organizations, groups, or local governments:

3c. Actively seek out and recruit community partners for communication and program or service facilitation needs.

- Continue to strengthen government and utility services that already have partnership-based models by actively recruiting grassroots and frontline organizations.
- Stay actively informed about missions, constituencies, locations, etc., of community-based organizations to understand current and potential partnership opportunities. Seek input from organizations with seemingly unrelated missions or interests.
- Ask community partners what benefits or compensation they need to be a bridge between a program and their constituents.
- After listening to communities' concerns, work with community partners to communicate climate risks and identify accessible ways to mitigate and manage those risks. Discuss how governmental agencies can support their outreach and social media efforts.

Local organizations working on the ground are trusted and well-positioned to share information and support but are not aware of the many government programs and services available.

Example Suggestion: Focus group participants said that in Spanish-speaking cultures, it is considered wasteful to replace still-working (but old) equipment. To build on the idea of avoiding waste, program messaging could be adapted to highlight the waste that is created by running old and inefficient equipment, and what can be saved by participating in efficiency programs. (Service or Commodity Area: EE).

3d. Expand intermunicipal and regional collaboration.

> *"Programs targeting local governments often miss the relationship between choices that communities make that affect other communities—e.g., suburban sprawl. Growth of parking lots around our older cities impact drainage."*
>
> *- Focus Group Participant*

- Encourage and support intermunicipal planning on cross-boundary issues like flooding.
- Make funding opportunities easier for intermunicipal alliances to apply for and receive funds (at the same time, do not penalize grant applications from disadvantaged communities without partnerships).

Climate hazards, like flooding, do not adhere to political boundaries, nor do many transportation needs. Additionally, communities need and want help coming together.

Example Program: Waterfront Alliance of New York and New Jersey has brought together local elected leaders, community boards, planners, public and private organizations, and residents to craft a vision for a resilient future for New York Harbor, including waterfront accessibility, businesses, and jobs, "waterfront edge" climate adaptation, and education. The task force includes environmental justice leaders from both states. (Service or Commodity Area: Adaptation)

Example Program: The Port Authority of New York and New Jersey is collaborating with State agencies and community groups from New York and New Jersey to transform operations at their facilities with environmental initiatives that reduce greenhouse gas emissions and improve air quality. An example program from this collaboration is the Truck Replacement Program at the Port of New York and New Jersey. This program is reducing diesel truck emissions by phasing out older trucks serving the marine terminals and offering grant funding to qualified drayage truck owners towards the purchase of newer, cleaner, more fuel-efficient replacement trucks. The program reduces emissions of criteria pollutants and improves air quality within the marine terminals and the surrounding areas, which include disadvantaged communities and environmental justice areas. (Service or Commodity Area: Transportation, Health and Safety).

3e. Include a range of stakeholders with different roles and areas of expertise.

- Couple State-level resources, data, and technical assistance with local knowledge for planning.
- Continue to encourage and reward planning across political levels, such as bringing community groups and organizations, and local, State, and federal agencies to the table for climate resilience planning.
- Educate State representatives on how they can support or fund local initiatives while in office and encourage organizations to invite their State representatives to participate in local planning.
- Build agency capacity for producing information and resources in partnership with multi-disciplinary researchers and communities.

Including various types of stakeholders helps to address the many needs that communities have and ensures important stakeholders are not missed. Elected officials can help get projects off the ground by connecting local organizations to resources or funding.

> *"Our congressman has been helpful; [he] got Biden to put some money in the budget to combine all past studies into one for Howard Beach [resilience efforts]."*
>
> *- Focus Group Participant*

Example Suggestion: Couple the provision of climate risk and vulnerability information by State or regional agencies (e.g., flood-risk areas or vulnerability assessments), with technical resources for local planning discussions where neighborhood leaders, local representatives and planners can assess the information. (Service or Commodity Area: Adaptation).

3f. Update codes, rules, and policies that currently limit or prevent climate change solutions.

- Ask community leaders what housing, zoning, transportation, infrastructure, and environmental codes are preventing actions to (1) create fair and safe housing, (2) make communities more resilient, and (3) make transportation options cleaner and more accessible, etc.
- Utilize model codes or policies to make updates (e.g., International Energy Conservation Code).

Housing and transportation policies developed without climate impacts in mind may conflict with community interests, including just and equitable housing and climate goals.

Example Suggestion: Amend local code ordinances toward stormwater-friendly practices (e.g., reduce minimum parking requirements). Look to "model" codes and policies like NYSERDA's zero-energy codes, for example. (Service or Commodity Area: Adaptation).

Example Program: As required by the Community Risk and Resiliency Act, the Department of State worked with the DEC and other partners to create model local laws to help local governments be more resilient to sea-level rise, storm surge, and flooding. Cities, towns, and villages may adopt model local laws to meet the resilience needs of the community with the assistance of their municipal attorneys. (Service or Commodity Area: Adaptation).

3g. Recognize and address the compounded effects of systemic racism and environmental and climate injustice within climate plans.

- As above, plan for the most vulnerable, by asking and listening for existing problems that will worsen in emergencies, such as poor housing conditions (with health implications), inadequate or obsolete communications infrastructure, limited access to jobs and services, poor energy reliability and high energy costs, limited access to food, and poor security.
- Invite people representing diverse and specific interests (e.g., food security; mental health services) to the table for climate planning.

The effects of systemic racism are compounded in climate plans (especially relocation and displacement plans) and climate emergencies.

Example Program: New York City is working on a comprehensive study of environmental justice. The Environmental Justice for All Report will identify which communities are being disproportionately affected by environmental burdens and not seeing the benefits of the City's investments in climate resiliency. The report will inform the development of an environmental justice plan, which will guide how city agencies should incorporate environmental justice into decision-making and community engagement processes. (Service or Commodity Area: All).

Example Project: The process to develop the recommendations for the CAC's draft scoping plan employed inclusive strategies to ensure that the recommendations deliver climate justice to New York State's disadvantaged communities. The CAC's sectoral advisory panels, which included representatives of environmental justice organizations, conducted a public process to develop their recommendations, hold public engagement sessions, conduct public surveys, meet with the CJWG, and accept and incorporate comments throughout the process, with a focus on benefits and impacts to disadvantaged communities. This stakeholder input is reflected in the recommendations delivered to the CAC and, after further input from the CJWG, have been incorporated into the draft scoping plan. (Service or Commodity Area: All).

Recommendation Theme 2: Streamline Program Access

Recommendation 4: Transition to Program Models that Require Little or No Effort to Participate and Benefit

Programs and services directed at disadvantaged communities should offer models that require either no effort, or a very limited amount of effort, to participate. These communities often have several competing demands on their time to meet basic needs. For individuals or households, these demands could include finding and maintaining employment, balancing and prioritizing essential expenses with strictly constrained resources (having to make decisions between paying for rent, food, or medication), and arranging childcare. Local agencies or community organizations may face several competing and often urgent community needs and priorities with lack of or limited staff and resources. Many programs, including those that could help alleviate those resource constraints, require additional staff and resource investments to make them accessible to the communities most in need of program benefits. To overcome these barriers, programs or services directed at communities should offer models that require either no effort, or a very limited amount of effort, to participate.

Opportunities to work with individuals, households, or businesses:

4a. Automatically enroll people into programs where possible.

- Switch from application-based or opt-in models to automatic or opt-out models when it is possible to automatically screen, qualify, or enroll people without risk to them (i.e., they are not penalized nor lose out on participation in another offering). Qualify or enroll participants based on meeting specific and measurable criteria, such as income eligibility, that may be collected through other efforts or programs.
- Offer program measures or solutions that are, preferably, no-cost to the community member.

> *"Making it…something you don't have to sign up for, not (have to) go out of your way, that would be good. If your town could enroll every customer and business in it, that would be great. Only pay one bill. Don't want to have to pay separately."*
>
> *- Focus Group Participant*

Individuals in disadvantaged communities often do not have the time, money, or resources to dedicate to lengthy application processes or invest in measures with high-upfront costs, but still want to benefit from programs and services.

Example Program: NYSERDA and National Grid propose to provide electric customers who are enrolled in the Energy Affordability Program (i.e., a low-income bill discount program) with automatic participation in Community Solar through a program called Solar for All. Customers would receive up to $10 per month in additional utility bill assistance with no need to provide more paperwork. (Service or Commodity Area: EE, RE).

Example Program: Energy utilities automatically enroll eligible customers in their utility bill assistance programs based on data received from State agencies. (Service or Commodity Area: EE).

4b. Automatically refer eligible people and businesses between programs with follow-through.

- State and local programs assume the responsibility for coordinating across and within programs, including through information and data sharing (e.g., eligibility, documentation), or community member outreach.
- Establish a "no wrong door" approach, which gives responsibility to agencies to coordinate and find solutions for community members rather than referring them to another agency without knowing whether that agency can help. Explore the feasibility for a single public gateway for applications.

It is a community member burden to complete several applications (often with same information) and causes confusion/frustration as the application is re-directed between programs or people within a program.

Example Suggestions: A focus group participant said that individuals enrolled in the Supplemental Nutrition Assistance Program (SNAP) are automatically referred to Home Energy Assistance Program (HEAP). (Service or Commodity Area: EE).

Example Program: Energy utilities refer their low-income community members to the NYSERDA EmPower NY program to receive energy efficiency services. Additionally, OTDA refers HEAP clients to the NYSERDA EmPower program to receive energy efficiency services. (Service or Commodity Area: EE).

Opportunities to work at the community level (via community organizations, groups, or local governments):

4c. Directly award grants to communities instead of requiring lengthy and competitive application processes, to the extent consistent with relevant legal requirements.

- Distribute funding based on specific criteria that indicate the level of risk a community faces to climate vulnerabilities and hazards.
- Reduce application requirements and support communities in bringing necessary information together.

> *"Consultant groups that hold charrettes and public meetings in upscale communities…which may have less potential impact or [have] already taken steps to address resiliency, end up looking more engaged and responsive than communities that are right in the mix with under-resourced groups in highly impacted areas."*
>
> *- Focus Group Participant*

Often, grant processes can be complicated, and past applicants who are more familiar with them are better positioned to win future work. For disadvantaged communities that face time and resource constraints, this may perpetuate a cycle where they are consistently several steps behind in climate planning. (See opportunity 6c. for support to prepare communities to receive funding).

Example Program: DOH Lead Service Line Replacement grants are awarded based on criteria like childhood blood levels within the community. (Service or Commodity Area: Health and Safety).

Recommendation 5: Establish People-Centered Policies, Programs, and Funding Across Local, State, and Federal Governments

In many cases, opportunities are not presented in an accessible or clear way to communities. Where automatic or "opt-out" participation models are not feasible, policies, programs, and funding opportunities should be more people-centered. This means finding out about and gaining access to programs and services is made as easy as possible and in a way that communities can understand how they fit in and can benefit. In many cases, opportunities are not presented in an accessible or clear way to communities, and as a result people may miss opportunities to participate.

Opportunities to work with individuals, households, or businesses:

5a. Expand eligibility where feasible to maximize impact, and coordinate between programs.

- Review and revise participation requirements where possible to increase the number of community members who can benefit, recognizing that creating long waiting lists for high-demand programs has its own implications.
- Assess eligibility across related offerings, and to the extent possible, make eligibility uniform and consistent across-the-board; conduct a review to identify discretionary criteria that create barriers to participation and revise them to increase access.

Too strict or arbitrary eligibility requirements and inconsistencies across programs and services can limit access to the populations that need them.

Example Suggestions: Expand the Home Energy Assistance Program (HEAP) to supplement utility costs associated with cooling as well as heating. Focus group participants also suggested that eligibility for energy efficiency programs should include all fuel types through dual-fuel or fuel-blind programs, and that income ranges for income-qualified programs should be expanded to avoid arbitrary cut-offs. Note: Many of the rules for these programs are federal and not subject to change by the State. (Service or Commodity Area: EE).

Example Program: The Weatherization Assistance Program (WAP), administered by New York State Homes and Community Renewal and NYSERDA's EmPower New York program, established categorical eligibility for energy efficiency and weatherization services based on the OTDA-administered HEAP, and other publicly administered assistance programs. In addition, these agencies coordinate to improve access to the programs and to increase the impact of public funds by working to streamline income eligibility and simplifying participation. For instance, NYSERDA and HCR have developed a common application that can be used for the WAP and EmPower programs, which enables HCR and NYSERDA to streamline the referral of clients between programs. (Service or Commodity Area: EE).

5b. Provide clearer participation roadmaps and pathways for community members.

- Review the participation process from the community member's perspective to identify pain points.
- Proactively chart out the participation process for community members through providing clear and concise visuals and guidance.
- Reduce or eliminate roadblocks, including (but not limited to) lengthy or confusing applications.

Community members do not have the time nor resources to navigate and wade through numerous webpages or program processes.

Example Program: DEC's Climate Smart Communities (CSC) certification program recognizes municipalities that have led by implementing local climate mitigation and adaptation actions. Participating CSCs earn points toward achieving bronze or silver certification and must also complete a set of priority actions. The program's priority actions are focused on local capacity building and planning, providing a framework that allows the CSC to select actions that are appropriate to local goals and circumstances. (Service or Commodity Area: All).

5c. Offer more direct access to resources, information, data, and knowledge.

- Present programs, services, and information in a way that is relevant and meaningful to communities.
- Provide segmented examples or case studies from peers about how to address/resolve issues and offer clear value propositions.
- Expand one-on-one outreach to vulnerable communities in emergencies, either through local government or community organizations about services available (e.g., flood or cooling shelters, transportation options, etc.).

> *"The key to anything is information—cities should put a blurb out saying you're in X flood zone. Utilities should do the same."*
>
> *-Focus Group Participant*

If a program does not appear relevant or for community members, they will be less likely to participate or want to understand further.

Example Suggestion: Focus group participants who are small business owners/managers in disadvantaged communities said that maintenance costs for running diesel trucks are significant. Agencies could emphasize this more as a value proposition for small businesses to transition to electric vehicles. (Service or Commodity Area: Transportation).

Example Program: The DOH Heat Vulnerability Index helps identify heat vulnerable populations, including those who do not speak English very well. Local agencies can use the "Language Vulnerability" component mapping to identify areas with high proportions of such populations and translate messaging to improve awareness. (Service or Commodity Area: Health and Safety).

Example Program: NYSERDA's Clean Energy Hubs are designed to be centers of outreach, awareness, and education in each of the 10 Regional Economic Development Council (REDC) regions, to improve community engagement and ensure that all New Yorkers can benefit from the State's clean energy transition. A Regional Clean Energy Hub is defined as an organization or network of organizations, responsible for establishing and fostering partnerships in their region to deliver services at the community level. Organizations with experience in providing services in clean energy, energy efficiency, social services, housing, economic development, health, and training are all encouraged to participate in the development of a Hub as a new way to offer services to members of their communities. (Service or Commodity Area: All).

5d. Assess opportunities to merge, combine, or closely coordinate related programs across State agencies, to the extent consistent with legal requirements.

- Provide consistency in offerings once program offerings are combined and coordinated.
- Offer a more streamlined and clear presentation of participation opportunities to the community member, deprioritizing irrelevant details (e.g., the different funding streams or sources involved, agency tracking requirements, etc.).

"State programs come and go in fits and starts. They are around for a few years and disappear. No reasoning for why things disappear. People move on and look for different sources of funding. Need consistency."

- Focus Group Participant

Too many program options (and changing options) can be confusing and lead to non-participation.

Example Program: NYSERDA and New York energy utilities jointly file an implementation plan for the statewide portfolio of energy efficiency programs and initiatives for low- to moderate-income communities in New York State. Key objectives of the plan are to (1) improve the experience and benefits to low-income community members, (2) reduce administrative costs and increase the impact of ratepayer funds, and (3) provide more consistent and streamlined participation. (Service or Commodity Area: EE).

Opportunities to work at the community level (via community organizations, groups, or local governments):

5e. Review and reemphasize the State's role as the connector between federal and local programs and services and across different market actors.

- Identify areas where State agencies can provide direct consultation and support to local governments, so they can easily understand and access federal funding and resources.
- Provide centralized and concierge-type consultation to local governments to help them navigate through federal requirements, funding opportunities, and contracts.
- Expand access to mentorship, networking, and subcontracting opportunities so that small businesses can build relationships and find success with government actors in contracting.

Local governments want to benefit from federal programs but often do not have the time and resources to navigate them. Similarly, small businesses want to participate in local, State, and federal funding and contracting opportunities, but may not be aware, have the time to explore and develop their options, or face historic barriers. State agencies can play a vital role in serving as the connective tissue between local and federal resources and across different actors (local government agencies, small businesses, etc.).

Recommendation 6: Find and Support Resource-Constrained Local Governments

To ensure that towns, villages, cities, and counties (i.e., local governments) are prepared to face the climate crisis, the State government should proactively identify and provide additional support to the most vulnerable municipalities. Additionally, the State government should develop targeted information, education, and training opportunities for these municipalities, and the State should make existing data and information, education, and training opportunities more accessible. Some local governments may face multiple barriers to addressing the climate crisis in their community, including a lack of awareness and uncertainty about risk levels and needs, a lack of information and data to be able to assess needs, and limited resources (e.g., limited tax base) to plan or act on adaptation or mitigation strategies. At the same time, disadvantaged communities often face locally specific challenges that require unique and potentially not readily available targeted solutions and approaches, for example in the context of historic burdens of pollution and contamination, disinvestments, or specific social, cultural, and economic needs and capacities.

Opportunities to work at the community level (via community organizations, groups, or local governments):

6a. Identify the most vulnerable communities and craft a set of services that are most frequently needed.

- Define criteria that make a community especially vulnerable to climate change, such as low levels of historical investment and inequities, high utility arrearages or shut offs, etc.
- Provide an expanded level of services to the most vulnerable communities, so they can plan for and act on climate adaptation and mitigation strategies, bringing together outside or State agency expertise with local knowledge, resources, and capacities.

"It's not about throwing money at the problem, or even the savings…you have to bring a bunch of people here who have the expertise. But people in the community may be interested in learning these skills—bartenders who don't want to be bartenders anymore. They may want education. Train technicians. The community would welcome training and homegrown orgs with open arms."

- Focus Group Participant

These communities are especially at risk to the effects of climate change and require additional support.

Example Suggestion: Focus group participants said there should be more State and county resources to support local planning, especially for communities with minimal or no staff (e.g., paid "climate coordinators" for the Climate Smart Communities and Clean Energy Communities programs, or funding positions for Community Organizations Active in Disaster (COAD). (Service or Commodity Area: Adaptation, EE, RE, All).

Example Program: As previously noted, DOH developed a Heat Vulnerability Index to help local agencies with identifying areas with high proportions of heat-vulnerable populations and inform local heat-mitigation and resource planning. Maps and data are available for public access and download on the website, and DOH can also help local agencies that need support with identifying and mapping heat vulnerability in their community. (Service or Commodity Area: Health and Safety).

6b. Provide digestible data and information to help local governments identify climate risks and potential adaptation/mitigation strategies.

- State agencies work together to serve up informative and actionable data, tools, and information to local governments about climate risks.
- Offer easily accessible information about the range of measures communities can implement to reduce specific climate risks, from infrastructure improvements to nature-based features.
- Assist local governments in understanding the costs and benefits of implementing certain improvements over others, including how to avoid maladaptation.

Local governments do not always have access to the right data or the time necessary to analyze it and visualize the impacts.

Example Projects: Create tools to meaningfully relate data on climate hazards, risks, vulnerabilities, and adaptive capacities to local contexts, like the New York City Hazard Mitigation maps and the DOH Heat Vulnerability Index previously mentioned. (Service or Commodity Area: Adaptation, Health and Safety).

> *"Quantifying impacts [of stream-based mitigation projects] is difficult, but there is more [of] an upside to protecting systems. Projects we put more money into seem more cost effective than engineered building projects. Engineering natural systems works sometimes but doesn't work other times. We need to think through more cost effective, multi-beneficial projects with conservation."*

Example Project: DOH developed County Heat and Health Profiles to help local agencies identify areas likely to have larger heat-vulnerable populations and inform mitigation and adaptation efforts. The DOH has also developed a StoryMap to disseminate information on the impact of extreme heat on health in the State. The StoryMap is informative and interactive and summarizes temperature trends and health impacts across the State. (Service or Commodity Area: Health and Safety).

6c. Bring education and training to local governments, so the governments are prepared to receive funding and understand what resources are available.

- Synthesize and organize existing information (like a central "hub") about federal and State grant opportunities and educate communities about these different funding opportunities.
- Provide "coaching" or advisory services via State agency staff to assist communities in accessing resources and understanding funding opportunities. Offer training and support to communities with limited experience, so they are prepared to receive and service grants. For example, this could include assistance with navigating funding requirements, help with identifying needs, or walking through application processes. Note that this may require additional State agency staff resources or contractors to remove any conflicts of interest (i.e., staff who score applications are not the same staff who provide help).
- Facilitate peer-to-peer learning opportunities so that communities can benefit from each other's real-world experiences.

Local governments are dealing with multiple community needs and State and federal requirements daily, and do not have time to navigate multiple websites or resources to identify new opportunities.

Example Program: Cornell Cooperative Extension provides grant and loan summaries to place active opportunities in one place. (Service or Commodity Area: All).

Example Program: With funding from the United States Centers for Disease Control, New York State has worked to increase awareness around the links between climate change and health among local health departments and other agencies. For example, DOH and DEC participated in "Public Health Live" monthly webcasts focusing on climate change. In the "Climate Smart Communities: Connections with Public Health" webinar, attendees learned more about the program and the impact of climate change on public health, including several examples of local adaptation work. In the webcast "Preparing for Extreme Heat in New York State" attendees learned about health risks of exposure to extreme heat, current and projected climate trends, and practical strategies to help the public prepare for extreme heat. (Service or Commodity Area: Health and Safety, Adaptation).

Example Programs: The Hudson Valley Regional Council, through its work as a NYSERDA Clean Energy Community coordinator, offers the Clean Energy Communities (CEC) Institute to participating communities in its service area. The institute provides instruction on completion of CEC high-impact actions through webinars, testimonials, web content and cohort-style workshops. (Service or Commodity Area: All).

Recommendation Theme 3: Address Emerging Issues

Recommendation 7: Mobilize Citizen Participation and Action

Make it easier for community members to share and report on what they see at the local or State level to ensure that opportunities and capacities are supported and leveraged, concerns are heard and addressed, and result in solutions that match the needs. Throughout focus groups and public input, participants gave detailed examples of problems they observed (e.g., sewer overflows, brittle trees, health-vulnerable neighbors) and potential solutions they identified. In many cases, people tried to raise the concern locally but were not sure of the right channel or did not receive attention or help.

Opportunities to work with individuals, households, or businesses:

7a. Develop channels and tools for people to report local concerns.

- Expand marketing, outreach, and education about phone, app-based or web-based reporting tools to report substandard housing conditions, power outages, flooding concerns, and other issues.
- Provide a follow-up process to demonstrate that local and State governments are listening and acting.
- With respect to housing, continue educating tenants and local organization on renter rights around housing quality and options to raise concerns, including anonymous reporting for those fearful of landlord response or retaliation.
- Reach out to housing service providers (e.g., refugee resettlement agencies) to understand what these providers have heard or observed and co-design a reporting and resolution process.

People are noticing how and where their environment is changing and are ready to act. There is tremendous information in what people already see and observe, and power in listening and mobilizing their ideas.

Example Suggestion: Citizen reporting through 311, coupled with a "citizen request management process" to respond to neighborhood and housing-related concerns. Many communities have adopted "SeeClickFix" for people to anonymously (if desired) report non-emergency problems like waste and trash disposal or property maintenance. (Service or Commodity Area: EE, All).

7b. Support people and neighborhoods in providing feedback about climate issues that affect them.

- Continue to expand "citizen response" processes to track and record incoming ideas, respond to, or explore emergent issues with citizens, community groups, organizations, and local government.
- Connect citizens with community groups and organizations, local planners, or officials, technical assistance, and resources (data, tools, or experts), or coaching and guidance on navigating the process.

Individuals take many different paths to raise their concerns, from contacting a local official in-person, by phone, email, or social media, to writing a letter to their town or state representative. Often their approach does not align with "official" channels, and they become frustrated by lack of a response.

Example Suggestion: When a neighborhood group points out repeated local flooding without full scientific documentation and/or direction to the right department, allocate staff time to help them navigate city processes or find resources to build out their evidence. (Service or Commodity Area: Health and Safety, Adaptation).

Example Program: The NYSERDA Climate Justice Fellowship program supports the professional development, training, and mentoring of full-time fellows currently residing in disadvantaged communities and priority populations including individuals that are low income, disabled, homeless, formerly incarcerated, residents of environmental justice communities, veterans, and Native Americans. Fellows work with community-based organizations, universities, municipalities, climate tech innovators and startups, and clean energy businesses to assist with and support community engagement activities, clean energy project development and implementation, partnership building, clean energy startups, or other projects that advance climate justice and clean energy priorities in disadvantaged communities. (Service or Commodity Area: All).

> *"Every apartment had an outage. It was out for six days…No hot water, no refrigerator, no food, and food went bad. They [public housing] were dragging their feet to get it fixed. People had breathing equipment they needed to use. We got creative and went to [the] Family Dollar Store and put care packages together. We bought candles, and hot pots that heat with gas, battery-operated lights. Fourteen people put together all the money we had to help everyone get through six days…This was a horrible time. And not even from a hurricane. But nice to see the community come together. Nice to see how many people cared."*
>
> *- Focus Group Participant*

7c. Facilitate ways for community members to contact and support each other in emergencies.

- Help neighbors form smaller groups or cohorts at the neighborhood level, such as mutual aid networks, to learn about each other's needs in emergencies, provide direct outreach or support after an emergency and help link State resources directly to local communities in need.
- Ask existing neighborhood organizations what may help them build capacities and mobilize in emergencies. Encourage and fund volunteer training (e.g., through Community Emergency Response Teams).
- Identify roles for people with less time for training, or with physical or other limitations (e.g., phone, SMS, or social media support roles). Provide tangible resources (e.g., outreach materials, care packages, vouchers).
- Continue developing and promoting Wi-Fi locations with backup power.

Neighbors are ready and willing to help each other, but may not feel well-connected, and need a pre-existing structure/system to facilitate this.

Example Program: New York City offers a Community Preparedness Boot Camp, a Public Safety Communications Training, and a Community Emergency Response Team training. (Service or Commodity Area: Health and Safety).

Example Program: Many New York State counties have and maintain their own Community Emergency Response Teams, with volunteer members who undergo a training program that covers basic safety and disaster response skills. Also, the New York Division of Homeland Security and Emergency Services offers the Citizen Preparedness Corps training for the general population. The goal of this training is to allow residents to have the tools and resources to prepare for any type of disaster, to respond accordingly, and recover as quickly as possible. (Service or Commodity Area: Health and Safety).

7d. Find and support local champions.

- Facilitate peer-to-peer learning and inspiration through local connections and events, with help from early adopters and local champions who are eager to share what they have learned.
- Start small, for example through faith-based organizations, local libraries, or community centers, where people feel comfortable asking questions.

Peers who have navigated a tough process are often interested in sharing their experience, and their stories may be more powerful than State-level outreach.

Example Suggestion: Train a volunteer corps of "solar and resilience ambassadors" to distribute information, make presentations, provide a roadmap, and help people. (Service or Commodity Area: RE, Adaptation).

Example Program: NYPA, through its Environmental Justice Community Energy Education programming, conducts weatherization workshops for low-income homeowners and renters. Workshop participants learn about simple ways to lower their heating and cooling costs, including low-cost changes they can make in their homes to help prepare for winter and summer energy needs. These interactive sessions are taught by NYPA's expert staff, in partnership with community organizations, including places of worship and neighborhood organizations. Workshops and materials are translated into different languages to ensure weatherization messages are appropriately communicated to audience members that may speak different languages. (Service or Commodity Area: EE).

Recommendation 8: Improve Housing Conditions and Adherence to Local Building Codes

Dramatic action must be taken at the intersection of environmental and housing policy to mitigate and adapt to climate change. The most vulnerable communities and households will bear the brunt of the changing climate and increasingly frequent and severe natural disasters. In focus groups with New York State residents, as well as representatives of community organizations, participants explained they are experiencing the threat of climate change in the context of a housing crisis. Rising prices, housing scarcity, and deferred maintenance have created a housing affordability crisis and substandard living conditions that disproportionately affect renters and households with limited financial resources. Addressing the climate and housing crises in tandem will be more effective than addressing them separately.

Opportunities to work with individuals, households, and businesses:

8a. Address building integrity from a health and safety perspective.

- Explore program interventions that identify and/or address building integrity or weatherization needs alongside health and safety concerns.
- Provide healthy homes services which include an in-home environmental assessment to identify health, safety, and building performance issues, provide needed home improvements and/or modifications to improve the home environment, offer supportive products, resident education, and/or resources to support maximization of services.
- Coordinate energy, building, local health departments, health systems, and community-based delivery partners to identify and serve the most vulnerable New Yorkers.

Connecting weatherization and other energy efficiency measures to health and safety interventions facilitates synergies and cross-benefits. Benefits can include better home health, reduced hospitalization and/or illness, or lowered medical expenses, alongside lower energy consumption and bills, all contributing to residents' financial and physical health. Programs that address environmental, energy efficiency, health, and safety issues simultaneously can reduce burden on the residents and maximize the impact of State or program spending. The same measures can also reduce emissions.

Example Program: DOH and NYSERDA developed the Healthy Homes Value Based Payment Pilot to fund the combination of in-home asthma trigger reduction services and energy efficiency services, with the goal of validating healthcare cost savings to Medicaid. Four Managed Care Organizations are currently participating in the pilot statewide. The pilot's residential healthy homes intervention combines energy efficiency/weatherization measures with in-unit measures aimed at addressing respiratory conditions such as asthma and includes additional measures aimed at addressing home injury. The intervention includes home visits from a registered nurse providing education related to asthma self-management and medication adherence, with community health worker support. Based on the pilot, it is expected that managed care organizations will invest in asthma trigger reduction as a preventive measure under Medicaid. (Service or Commodity Area: EE, Health and Safety).

Example Program: The DOH Healthy Neighborhoods program includes home visits to identify environmental, health and safety challenges in the home. The checklist includes evidence of mold or mildew, pest, or rodent infestation, working smoke detectors, smoking in the home, or whether anyone in the home has asthma. Working with residents to address concerns identified in the first visit can result in reduced missed days of school for children with asthma, along with other benefits (e.g., most homes are able to manage the pest or rodent infestation or obtain a working smoke detector). (Service or Commodity Area: Health and Safety).

8b. Continue to improve housing and energy upgrade incentives and financing for building owners serving disadvantaged community members.

- Use touch points like (1) the time of property purchase or refinance, (2) municipal interactions (e.g., permit applications, re-assessments) or (3) interactions with utility companies to promote building improvement programs and offers to multifamily building owners. Additionally, consider performing outreach through existing channels and local networks used by building owners, like local or regional apartment associations.

- Continue expanding multifamily incentive programs and offering low-cost financing options to cover both energy upgrades and related repairs. For example, mini-split heat pumps that offer both heating and cooling, solar arrays, and other energy efficiency and weatherization measures, like attic insulation and air sealing, can both reduce monthly energy costs and make buildings more comfortable and safer during extreme heat or storms. Programs should also cover other building repairs that may prohibit energy upgrades if left unresolved, such as inadequate or damaged electrical equipment or roofing.
- Like recommendation 5d, find ways that State agencies can combine, coordinate, and simplify incentive and financing offerings for multifamily building owners so that the amount of effort necessary to participate is reduced.

Although numerous weatherization and energy efficiency programs exist with high incentives for landlords of buildings with low- to moderate-income occupants, the need for other building repairs (e.g., electrical upgrades, roof replacement or repairs, asbestos, or mold remediation work) and lack of time or interest may impede participation.

Example Program: HCR and NYSERDA have partnered on a pilot initiative to support current and future affordable housing developers in pursuing very efficient, all-electric new construction or adaptive reuse projects. To make this possible, HCR and NYSERDA worked together to coordinate and streamline clean energy incentives, technical support, and financing offerings. (Service or Commodity Area: EE).

Opportunities to work at the community level (via community organizations, groups, or local governments):

8c. Address the possibility of climate-related displacement or relocation early, and work with communities to develop questions and options.

- Provide earlier and better outreach about climate adaptation plans, especially if relocation or managed retreat are under consideration.
- When discussing managed retreat or relocation, involve renters (especially those in public housing), people with physical disabilities, undocumented immigrants, and people who are homeless, in figuring out what it could look like—scenarios, timing, locations, etc.
- Provide data, tools, resources, and technical assistance to help residents understand the risks, costs, and trade-offs of multiple scenarios.
- Work with residents to determine what fair reimbursement and other services would look like (e.g., going beyond reimbursement to tenant relocation assistance such as legal aid, job-seeking resources, utility connection or bill assistance).
- Help communities identify funding for planning, include federal, State, local and philanthropic sources.

In focus groups, some residents were acutely aware that "housing mobility" is being discussed as an option for them. They expressed fear of displacement, frustration with planning processes that feel exclusionary, and a sense of injustice that "luxury" developer interests are often prioritized over the needs of less affluent community members. Several residents felt they heard about planning discussions or policies too late, and by the time a draft policy was written, they felt it was too late to get involved. If climate migration, retreat, or "housing mobility" toward areas less vulnerable to flooding or extreme weather is a possibility, they want to be involved early in understanding what that means and how to support people at risk of displacement.

> *"The plan basically says that if there's not a flood protection plan in place, their plan is "housing mobility" which means you get relocated! But who gets relocated? Black, female, low income. This is a major concern. Hard to believe that we can't do better than "housing mobility" as the plan to relocate people."*
>
> *- Focus Group Participant*

Example Program: After Hurricane Sandy, community members from Oakwood Beach on Staten Island formed the Oakwood Beach Buyout Committee to plan for coastal retreat. The committee educated residents about State government buyouts and created a plan to petition the State government to buyout entire neighborhoods, which resulted in a larger scale risk reduction to future storms than if individual buyouts were pursued. (Service or Commodity Area: Adaptation, Health and Safety).

8d. Institute anti-displacement, relocation, or managed retreat policies that consider social, cultural, and historical context in addition to infrastructure and natural environment.

- When new affordable or public housing is built, where possible, give preference to people residing in the area and/or with generational ties to the area.
- If climate-relocated is necessary, per the recommendation above, work with residents to understand how/where they may want to move and try to find options that are within reasonable travel (transit) distance to social, family, and employment networks.
- Co-design managed retreat strategies that do not exacerbate historical and systemic discrimination and inequalities, including but not limited to unequal participation or reimbursement, or climate redlining.
- Account for the social and community costs and impacts of relocation, among people moving and remaining in vulnerable areas, when planning and funding strategies.

In focus groups, participants who expressed fear of climate-related displacement or migration expressed fear or uncertainty about being moved from their social, family, or work networks. They were also aware that federal disaster aid is often much lower than needed or insufficient to rebuild or relocate, not to mention nonmonetized costs. Climate-related migration evokes the historical trauma of redlining and forced relocation of Black and Indigenous communities, through the present in experiences, such as Hurricane Katrina. The average amount of disaster aid that households receive is much lower than the federal caps, and the assistance rarely accounts for the actual costs of rebuilding or compensates for the disproportionate effects of even slight financial disruptions on lower-income, vulnerable households, and the nonmonetizable costs to lives and livelihoods.

Example Program: The New York City Department of Housing Preservation and Development (HPD) facilitated an 18-month, community-driven relocation plan with the Edgemere neighborhood in Queens after Hurricane Sandy that included community members, elected officials, nonprofits, New York City Housing Authority (NYCHA), and city agencies. Together they addressed related issues like job training and access, transportation, amenities for healthier neighborhoods, and potential blight of vacant retail into a long-term vision (Resilient Edgemere Community Plan). (Service or Commodity Area: Adaptation, Health and Safety).

8e. Increase building health and safety and energy code enforcement efforts and partnerships.

- Increase funding and technical support for local training and code enforcement of both energy codes and housing health and safety codes.
- Integrate both health and safety and energy code enforcement into funding and program implementation, to align incentives for property owners, residents, utilities, and local governments.
- Focus on rental housing with (1) higher concentrations of economically or health-vulnerable New Yorkers, populations who have historically experienced housing discrimination or insecurity (e.g., Black, Indigenous, People of Color (BIPOC), limited English proficiency, New Americans, formerly incarcerated), or who are at risk of displacement from climate change or gentrification, or (2) a history of housing code violations.
- Organize and fund building code coalitions with key stakeholders (e.g., utilities, State energy office, regulatory bodies, housing advocates, public health, building professionals, and community-based organizations).
- Provide legal education and support for tenants and their representatives. Include community organizations and housing advocates in training and coalition-building so that they can understand and advocate for tenant rights.

Safety code violations affect living conditions and the ability to make energy improvements, particularly in rental and public housing. Renters in disadvantaged communities typically experience more housing quality and housing energy issues than homeowners given the "split incentive" for landlords to invest in building or energy maintenance or improvements. Lack of maintenance and upgrades can impact occupant health (via indoor air quality and temperature comfort), economic security (via energy bills and "surprise" costs),

> *"It's a slumlord epidemic. They buy up so much housing, and it's aging, they're not addressing it, there's no accountability. With climate change you risk serious loss. People can lose their homes."*
>
> *- Focus Group Participant*

stress and anxiety (from discomfort, costs, poorly functioning or broken systems/appliances). Additionally, unsafe building conditions are often an impediment to weatherization or clean energy. For example, outdated electrical wiring, mold or mildew, and roof conditions may stop a project. Stronger education, training, and enforcement of building codes is needed to improve housing quality and living conditions for vulnerable New Yorkers.

Many renters are uncertain or afraid to complain or ask for repairs. In their report and toolkit, Hester Street and the Cities RISE projects note that code enforcement is reactive, rather than proactive, where code enforcement officers spend more time responding to complaints. This has the effect of privileging those residents who have the resources (time, effort) and capabilities (language, comfort with government) to navigate the necessary channels to raise a concern.

Example Suggestion: Create an amnesty program for income-eligible property owners to improve the property to meet code. Such amnesty or funding programs, when accompanied by a limit on raising the rent for a given period (e.g., five years after the repairs) can prevent owners from selling to someone else who might be able to afford the repairs but would then increase the rent prices, potentially contributing to gentrification and displacement. (Service or Commodity Area: Adaptation, EE, Health and Safety).

8f. Bring energy code education and training to frontline contractors.

- Work with local contractor networks to bring energy code training—including new building or installation practices—to their sites, workplaces, or events.
- Continue supporting younger New Yorkers (ages 18–24) in green building and technology training and apprenticeships.
- Fund and design training to be accessible in terms of mode or channel, time, and resource commitment, language, education level (e.g., increased online trainings, abbreviated guidelines, translation, staff resources for live training or support).

Building with the latest energy codes requires not only awareness of the new codes, but significant changes to construction, installation, and Quality Assurance/Quality Control practices, which can seem time-consuming and onerous to learn, especially without real-life, on the ground examples. Seeing tangible examples or work from people you trust can help build trust and interest in learning new practices.

Example Program: NYSERDA's Energy Efficiency and Clean Technology Training program partners with local organizations, community colleges, and unions to offer numerous training and certification initiatives. NYSERDA's Talent Pipeline also encourages participation by and job placement for disadvantaged workers, including but not limited to, residents of low-income communities and environmental justice areas, displaced and dislocated workers, veterans, and People of Color. (Service or Commodity Area: EE, Health and Safety).

Example Program: Although not related to energy code training, the NYPA EV Fleet Donation program is pursuing efforts that exemplify workforce development partnerships within disadvantaged communities. As a part of this effort, NYPA partners with the Boards of Cooperative Educational Services of New York State to provide training to underserved students in environmental justice communities. NYPA donates retired EV fleet vehicles, offers training curriculum on EV technology and the positive role that EVs can play in the community, as well as provides EV supply equipment infrastructure and mentorship. (Service or Commodity Area: Transportation).

6 Next Steps

Following publication of this report, DEC and NYSERDA will commence reviewing the recommendations and opportunities with the CAC and incorporate recommendations and opportunities into the scoping plan. In addition, the agencies will work together to develop a process for assessing, refining, and ultimately implementing recommendations outlined herein. To ensure that the barriers and potential solutions outlined in this report reflect the evolving clean energy policy and program landscape, lessons learned from implementation, input from the CAC, and additional input from the public will be accepted and incorporated. DEC will continue to accept public comment on this report at any time. In addition, DEC will establish an ongoing assessment of disadvantaged communities' access to programs and resources, and opportunities for community ownership, as required by the Climate Act Implementation Reporting. This assessment will be informed by the outcomes of current climate change mitigation and adaptation programs, the implementation of recommendations outlined in this report, and through continued engagement with community members.

It is expected that the implementation of recommendations in this report will require additional work to assess the current state of climate change mitigation and adaptation programs—including uptake in disadvantaged communities—to identify policy and regulatory considerations that may need to be addressed, as well as to develop a mechanism to foster the interagency coordination necessary to achieve the recommended solutions. The following outlines the phases of activity that are expected to be necessary to implement these recommendations. Given the complexity involved in program modifications, securing additional funding, or addressing policy and regulatory changes, some recommendations may take longer to assess and implement. Estimated timelines for implementation will be included in the assessment of each recommendation. Finally, the agencies will incorporate a continuous assessment and refinement approach to ensure that market and policy developments are incorporated into any program or recommendation.

6.1 Phase 1—Assessment of Recommendations

- Sort each recommendation and its associated opportunities by implementing agency, priority, and feasibility for immediate action.

  - Each recommendation will be assessed for level of complexity; the modifications to existing programs, policy, or regulatory structure; and estimated timeline for implementation.
  - Priority will be assigned to those with the greatest potential impact in eliminating the identified barriers. Each recommendation will be further analyzed for the ability of agencies to incorporate it within existing organizational structures and staff assignments. Some recommendations will require additional resources for implementation, such as funding and training for agency staff and community member capacity. Strategies will be identified to procure these necessary resources.

- Assess the current uptake of clean energy programs in disadvantaged communities and explore current community ownership models to identify opportunities for refinement and inform assessment of and prioritize recommendations.

- Accelerate progress to coordinate interagency actions and secure meaningful community member involvement in program design and implementation.

  - For interagency coordination, the Low-Income Energy Task Force will be explored for adaptability or replicability, with consideration of the administrative capacity to adequately meet the needs.
  - New and existing structures and programs within New York State will be utilized for securing robust community member engagement.
    - In consultation with the CJWG, DEC and NYSERDA will select 10 disadvantaged communities across the State in which to deploy hyperlocal air monitoring technology and develop emissions reduction strategies based on the measurements. Community capacity building grants will be provided to ensure robust community participation in this initiative. This report's recommendations under the theme of ensuring inclusive processes can be embedded into the implementation of this initiative.
    - NYSERDA will launch the Energy Equity Collaborative and the Clean Energy Hubs. These could also be utilized by State agencies to meaningfully involve disadvantaged communities in all aspects of New York State's effort to respond to climate change. To illustrate the Clean Energy Hubs that will be established in each of New York State's 10 economic development regions may be leveraged locally to support the recommendations in this report to improve engagement, increase access to programs, or to advance accessible cooling centers, for example. Accordingly, consideration will be given to expand or replicate these structures to accommodate the actions required by other agencies to implement each recommendation.

- DEC's CSC program serves as a vehicle for climate change communication from State agencies to local governments and from local governments to the general population. The program has significant buy-in from rural and under-resourced communities where consensus on climate action can be harder to build. Given its high degree of trust, CSC could be an effective conduit to implement this report's recommendation to find and support resource constrained local governments.

- Create target goals for achieving measurable progress in improving access to programs and advancing ownership models, accountability to stakeholder input, and transparency in program design and implementation and policy decisions.

6.2 Phase 2—Implementing Recommendations

- Implement the recommendations based on priority and level of complexity.

  o Document this experience for further analysis and potential refinement of the recommendations.
  o Incorporate community member input in the prioritization and implementation of each opportunity.

- Make tangible progress towards acquiring the additional resources needed to implement select recommendations.

  o This may include draft proposals for new agency policies, programs, and budget requests.

- Maintain the flexibility to continue refining these recommendations as new insights are gained from their ongoing implementation as well as periodic reviews by the CJWG on the definition of disadvantaged communities.

6.3 Phase 3—Continued Assessment and Refinement

- Develop a reporting plan to provide updates on progress, as part of the Climate Act implementation reporting.
- Develop a plan to update these recommendations, with input by key stakeholders in disadvantaged communities, at least as often as updates to the scoping plan occur.
- Assess progress in implementing the recommendations through Climate Act Implementation Reporting. Share findings with Executive leadership and the CAC, community members, and other relevant stakeholders, and obtain feedback on these items or other priorities that must be considered.

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Appendix A. Research Approach

The study team completed the following tasks to inform the report: (1) agency coordination and input, (2) CAC and CJWG input and feedback, (3) secondary research review and analysis, (4) focus groups, and (5) public hearings and comments.

Specific research tasks are described in the sections below.

A.1 Agency Coordination and Input

In addition to several staff from agencies included in the study team, agency staff from DOH, DPS, DOT, DOL, OTDA, and HCR provided key input throughout the design and implementation of this study. DOH, DPS, and DOT also identified one or more study advisors to provide ongoing guidance to the project and review of key deliverables. Agency staff contributed to the study in several ways, as listed below.

- **Participated in a kick-off meeting.** Agency staff provided input on the objectives of the research, proposed study design, and key terms and definitions.
- **Review of key deliverables**. Study advisors reviewed key drafts of research instruments, including the focus group research plan, focus group participant screener survey, recruitment emails and other items. Study advisors also reviewed an interim memo on the secondary research findings, along with the draft report.
- **Contributed to an agency workshop.** The study team held an agency workshop to discuss findings from the secondary research and have discussions around key barriers faced by communities and how agencies were approaching them through programs or thinking about them.
- **Assisted in focus group recruitment.** Study advisors also played a key role in identifying and recruiting local government, community organizations, small business representatives and heat-vulnerable community members to participate in the focus groups.
- **Assisted in focus group topics and discussion guides.** Study advisors helped prioritize the topics for focus groups and identify, for each group, at least one tangible or programmatic example to discuss or test with participants.

In addition to the contributions above, study advisors also provided ad hoc support as needed.

A.2 Climate Action Council and Climate Justice Working Group Input and Feedback

The study team reviewed CAC meeting presentations and notes to gather input that could inform the report. The study team also requested and received guidance and input from the CJWG at several stages. CJWG members:

- **Provided feedback on the study design**, particularly the community-based outreach approach and importance of sharing/showing tangible examples of services/offerings in focus groups and hearings.
- **Supported outreach for focus groups, public comments, and hearings** through their organizations. CJWG member organizations posted and shared invitations and links through their organizations via social media and email.
- **Provided feedback on the draft list of barriers and opportunities** during a public meeting. NYSERDA also distributed the list of barriers and provided time for written or verbal feedback on barriers and opportunities.

A.3 Secondary Research Review and Analysis

The study team conducted secondary research to help to define the types and categories of barriers faced by households, communities, and small business in disadvantaged communities. Specific examples of barriers were identified in each category, in addition to examples of thematic models or programs for opportunities to overcome the barriers.

The secondary research effort focused specifically on sources identifying and documenting barriers that disadvantaged communities face in accessing or owning the five areas of services and commodities (listed in section 2 of the report), and programmatic approaches to addressing those barriers. The research focused primarily on three types of data sources:

- **Existing reports** prepared by other states and by New York State agencies to define and describe barriers to access and ownership faced by disadvantaged communities.
- **Direct input from New York State agencies and public input** to existing projects describing both barriers and the programs and strategies designed to address these barriers that are currently underway or in development.
- **Targeted literature review** focused on defining and addressing concepts of equity and climate resilience and the barriers to achieving equity and climate resilience in disadvantaged communities.

This research does not represent a full-scale literature search on the broader topics of energy equity and climate justice, or a comprehensive review of the programmatic offerings in New York State or other states. In addition, the term "secondary" in this context broadly refers to "existing" and can include current materials about and/or provided directly by New York State agency staff participating in the project.

A list of references is included in the associated appendix section.

A.4 Focus Groups

Drawing on guidance from agency study advisors and knowledge gaps identified in the secondary research task, the study team prioritized the broad Climate Act services and commodities for additional primary research through focus groups targeting community members (individuals or small business members) and community organizations or local government representatives.

Working closely with study advisors, the team then identified target participants and a relevant tangible example for each topic area to ground the focus group discussion. As an example, for the Climate Act service and commodity area of distributed renewable energy generation, the team identified "community solar subscription models" as the tangible example for the focus group targeting community members in disadvantaged communities. The Climate Act service and commodity areas, tangible examples, and target audiences are shown in Table A-1.

Table A-1. Focus Groups Details

Climate Act Service and Commodity Area	Tangible Example	Audience
Distributed Renewable Energy Generation	Community Solar Subscriptions	Community members
	Community-owned or community-initiated solar or storage.	Municipalities and Community Organizations.
Low-Emission and No-Emission Transportation	Climate emergency mobility options and accessibility without a car.	Community members w/o personal vehicles.
	Freight/delivery truck electrification.	Small business owners with truck/commercial vehicles.
Community Adaptation of Homes, Buildings, and Infrastructure	Climate resilience planning with natural features.	Municipalities and Community Organizations.
	Community interest in resilience infrastructure, e.g., microgrids.	Community members
Mitigating Health-Related Climate Risks	Keeping people safe in extreme heat, storms, and emergencies.	Municipalities and Community Organizations.
	Access to cooling in extreme heat.	Community members (Spanish only).

Focus group participants were recruited through an online application linked from the Climate Act website (climate.ny.gov) disseminated through a network of study advisor contacts and community organizations (local, regional, and statewide) through email and social media posts. The online application funneled applicants to the different services and commodities based on their role (community members, community-based organizations, government representatives, small business owners), preferred language (English or Spanish) and selected areas of interest.

Community members were screened based on whether they lived in zip codes classified as disadvantaged, using the method described in appendix B, with priority given to community members who are Black, Indigenous, or People of Color, and low- to moderate-income applicants. Local government, community organizations, and small business applicants were screened based on having relevant front-line experience in the topic area. In cases where there were more eligible applicants than spaces in a focus group, the team randomly selected participants within demographic subgroups to capture a diversity of perspectives across the State.

The basic breakdown of total focus group applicants, number eligible applicants, and final attendees by focus group is summarized in Table A-2.

Table A-2. Focus Group Applicant and Attendee Counts

Date	Topic	Audience	Applicants	Eligible	Attendees
10/18	Renewables (Solar subscription models).	Community members	27	24	7
10/19	Renewables (community owned/leased).	Municipalities and community organizations	31	30	8
10/20	Transportation options w/o cars.	Community members	19	16	7
10/21	Clean fuels for comm. Vehicles.	Small or Medium Business Owners/Managers	147	87	10
10/25	Adaptation/Resilience (flooding, heat).	Municipalities and community organizations	21	21	9
10/26	Preparing for climate change.	Community members	17	17	10
10/27	Emergency response to extreme weather.	Municipalities and community organizations	50	50	8
10/28	Health/safety in climate change.	Community members (Spanish)	14	10	6
TOTAL			**326**	**255**	**65**

All focus groups were 90 minutes and conducted online via Zoom. The team structured each discussion around initially soliciting the groups' needs and experiences around the general topic of climate change to identify broad barriers and experiences. This was then followed by a guided discussion of the tangible example, which served to prompt specific reactions, concerns, experiences, and barriers related to one of the five service and commodity areas in the Climate Act. The study team then wrapped up with an open-ended discussion of perceived opportunities for overcoming the barriers identified related to the tangible example and the topic more broadly.

A.5 Public Hearings and Comments

The study team held two virtual public hearings on November 3 and 4, 2021, as required by the Climate Act. Prior to the hearings, DEC posted a public notice and fact sheet, in both English and Spanish, explaining the purpose of the report and describing the team's early findings of the barriers that communities face in accessing and owning services and resources related to the five service and commodity areas in the Climate Act.

Each hearing included a presentation by the study team, providing an overview of the requirements of the Climate Act and the report, a summary of the initial findings, and questions to prompt feedback and input from the public. Written public comments were also solicited via online form, email, and postal mail. The number of public comments received are summarized below:

- Hearing on November 3, 2021: 35 attendees with 11 speakers
- Hearing on November 4, 2021: 62 attendees with 10 speakers
- Written public comments received: 26

Appendix B. Defining Disadvantaged Communities

During this study, DEC and the CJWG were in the process of defining and identifying disadvantaged communities per the following criteria of the Climate Act:

- Areas burdened by cumulative environmental pollution and other hazards that can lead to negative public health effects.
- Areas with concentrations of people that are of low income, high unemployment, high rent burden, low levels of home ownership, low levels of educational attainment, or members of groups that have historically experienced discrimination based on race or ethnicity.
- Areas vulnerable to the impacts of climate change such as flooding, storm surges, and urban heat island effect.

On December 13, 2021, the CJWG voted to approve the release for public comment of draft criteria to identify disadvantaged communities.[12] However, the draft criteria and draft list of census tracts were not available for this study. Therefore, to identify potential disadvantaged community members and organizations for focus groups, the study team considered a combination of several definitions to screen focus group applicants, including the following:

1. DEC Potential Environmental Justice Areas (PEJAs).
2. United States Housing and Urban Development (HUD) Low-income Housing Qualified Census Tracts.
3. Working draft of the CJWG's disadvantaged communities criteria and list of census tracts (draft from September 2021).

The first two definitions—DEC PEJAs and HUD Low-Income Housing Qualified Census Tracks—consider sociodemographic factors only (income and race/ethnicity). The third working draft scenario contains additional indicators for environmental burdens and climate change risks.

Appendix C. Principles of Community Engagement

The Jemez Principles for Democratic Organizing (Jemez Principles) are used by several community organizations in New York State, including WE ACT. New York City has also included characteristics of "meaningful engagement" within its draft scope for the Environmental Justice for All Report.

C.1 Jemez Principles

1. **Be Inclusive:** If we hope to achieve just societies that include all people in decision-making and assure that all people have an equitable share of the wealth and the work of this world, then we must work to build that kind of inclusiveness into our own movement to develop alternative policies and institutions to the treaties policies under neoliberalism. This requires more than tokenism, it cannot be achieved without diversity at the planning table, in staffing, and in coordination. It may delay achievement of other important goals, it will require discussion, hard work, patience, and advance planning. It may involve conflict, but through this conflict, we can learn better ways of working together. It is about building alternative institutions, movement building, and not compromising to be accepted into the anti-globalization club.
2. **Emphasis on Bottom-Up Organizing:** To succeed, it is important to reach out into new constituencies, and to reach within all levels of leadership and membership base of the organizations that are already involved in our networks. We must be continually building and strengthening a base which provides our credibility, our strategies, mobilizations, leadership development, and the energy for the work we must do daily.
3. **Let People Speak for Themselves:** We must be sure that relevant voices of people directly affected are heard. Ways must be provided for spokespersons to represent and be responsible to the affected constituencies. It is important for organizations to clarify their roles, and who they represent, and to assure accountability within our structures.
4. **Work Together in Solidarity and Mutuality:** Groups working on similar issues with compatible visions should consciously act in solidarity and mutuality and support each other's work. In the long run, incorporating the goals and values of other groups with your own work, to build strong relationships would be a more significant step. For instance, in the long run, it is more important that labor unions and community economic development projects include the issue of environmental sustainability in their own strategies, rather than just lending support to the environmental organizations. So, communications, strategies, and resource sharing are critical to help us see our connections and to continue to build on these efforts.
5. **Build Just Relationships Among Ourselves:** We need to treat each other with justice and respect, both on an individual and an organizational level, in this country and across borders. Defining and developing "just relationships" will be a process that won't happen overnight. It must include clarity about decision-making, sharing strategies, and resource distribution. There are clearly many skills necessary to succeed, and we need to determine the ways for those with different skills to coordinate and be accountable to one another.

6. **Commitment to Self-Transformation**: As we change societies, we must change from operating on the mode of individualism to community-centeredness. We must "walk our talk." We must be the values that we say we're struggling for, and we must embody the meaning of justice, peace, community.

C.2 New York City's Environmental Justice for All—Meaningful Involvement

New York City's Draft Scope document for the Environmental Justice for All Report defines meaningful involvement using the following characteristics identified by the United States Department of Energy:

- Opportunity to participate in agency decision-making.
- Ability to influence agency decision-making.
- Concerns of community members are taken seriously.
- Public is educated about potential impacts of agency decisions.
- Early engagement with affected communities.
- Consistent engagement with affected communities throughout the planning process.
- Language accessibility.
- Varied meeting styles.
- Accessible facilities.
- Both electronic and non-electronic communication.
- Consider forming committees composed of members of affected communities.

Endnotes

1   DEC (2021). Observed and Projected Climate Change in New York State: An Overview. Department of Environmental Conservation, Albany, New York: https://www.dec.ny.gov/docs/administration_pdf/ccnys2021.pdf

2   Horton, R., Bader, D., Rosenzweig, C., DeGaetano, A. & Solecki, W. (2014). Climate Change in New York State: Updating the 2011 ClimAID Climate Risk Information. New York State Energy Research and Development Authority, Albany, New York. http://www.nyserda.ny.gov/climaid

3   Rosenzweig, C., Solecki, W., DeGaetano, A., O'Grady, M., Hassol, S. & Grabhorn, P., (Eds.), 2011. Responding to Climate Change in New York State: The ClimAID Integrated Assessment for Effective Climate Change Adaptation. Technical Report. New York State Energy Research and Development Authority (NYSERDA), Albany, New York. http://www.nyserda.ny.gov/climaid

4   Hoerling, M., Eischeid, J., Perlwitz, J., Quan, X.W., Wolter, K. & Cheng, L. (2016). Characterizing recent trends in U.S. heavy precipitation. Journal of Climate, 29 (7), 2313–2332. http://dx.doi.org/10.1175/ jcli-d-15-0441.1

5   Dupigny-Giroux, L.A., Mecray, E.L., Lemcke- Stampone, M.D., Hodgkins, G.A., Lentz, E.E., Mills, K.E., Lane, E.D., Miller, R., Hollinger, D.Y., Solecki, W.D., Wellenius, G.A., Sheffield, P.E., MacDonald, A.B. & Caldwell, C. (2018). Northeast. In Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II [Reidmiller, D.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, K.L.M. Lewis, T.K. Maycock, and B.C. Stewart (eds.)]. U.S. Global Change Research Program, Washington, DC, USA, pp. 669–742. doi: 10.7930/NCA4.2018.CH18

6   See, for example, https://www.bloomberg.com/news/articles/2021-02-24/the-unequal-pandemic-in-nyc, which highlights food hardship, housing insecurity, unemployment.

7   Note that while the term "Disadvantaged Communities" is used throughout this report for consistency and to align with Climate Act language, terminology is still developing and being explored by state agencies.

8   California Energy Commission. "Low-Income Barriers Study, Part A: Overcoming Barriers to Energy Efficiency and Renewables for Low-Income Community members and Small Business Contracting Opportunities in Disadvantaged Communities." 2016, https://www.energyefficiencyforall.org/resources/low-income-barriers-study-part-a/

9   Labelled as RE (distributed renewable energy generation), EE (energy efficiency and weatherization), Transportation (low- or no-emission transportation), Adaptation (community adaptation of homes, building, and infrastructure), and Health and Safety (other services and infrastructure to reduce the risks of climate-related hazards).

10 Examples highlighted may include examples of programs (either within our outside of New York), or suggestions collected by the study team through secondary research, focus groups, public hearings, and comments.

11 Labelled as RE (distributed renewable energy generation), EE (energy efficiency and weatherization), Transportation (low or no-emission transportation), Adaptation (community adaptation of homes, building, and infrastructure), and Health and Safety (other services and infrastructure to reduce the risks of climate-related hazards).

12 As of the date of this report, DEC is finalizing documentation and materials that describe the draft Disadvantaged Communities criteria and list census tracts identified by the draft criteria. The draft criteria and list will be posted publicly online when available. CJWG meeting materials describing draft criteria prior to the CJWG vote are available at: https://climate.ny.gov/Climate-Justice-Working-Group

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