Investing In An Equitable, Low-Carbon, Resilient Future: A Guide to Using Bipartisan Infrastructure Law Funding for Climate Co-benefits

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ABOUT THE SEAP

SEAP is your partner and resource. We amplify the efforts of existing organizations and networks that work towards broadening economic power and building a more equitable future. Broadening economic power brings attention to how race, class and gender intersect social and economic policy in the South. We explore policy ideas designed to directly address these connections. SEAP focuses on 12 Southern states and marginalized/vulnerable populations within the region and is a fiscally sponsored project of the Roosevelt Institute.

INTRODUCTION

The Bipartisan Infrastructure Law (BIL), formally named the Infrastructure Investment and Jobs Act, made historic levels of funding available for investments in transportation, climate mitigation and resilience, environmental protection, and broadband access. To accompany the comprehensive guidebook and data released by the White House, this guide offers a step-by-step approach to identifying funding for initiatives that work synergistically to lower carbon emissions, build resiliency, and prioritize equity.

The effects of climate change are already being felt in cities across the South as the frequency of heatwaves, hurricanes, and flooding continues to increase. Comprehensive climate planning includes strategies for lowering greenhouse gas emissions as well as strengthening community and infrastructure resilience. These strategies should not only aim to avoid disproportionate costs for disadvantaged communities but should actively work to overcome pervasive disparities in access to services, resources, and information.

The sections below offer a guide to these key steps:

1. **Identify local priorities.** A review of cities that represent a range of different contexts in terms of population, demographics, and climate-related hazards revealed that cities across the Southeast have designed and implemented numerous sustainability and resiliency plans. See the plans reviewed for this report in the interactive map or listed in Appendix A.

2. **Assess priorities based on local needs, available funding, and potential for co-benefits.** Co-benefits are additional benefits that can be gained from a policy above and beyond specific policy targets. A decision matrix for cross-referencing programs, federal funds, and potential climate and equity co-benefits is available in Section 2.

3. **Develop a strategy for community engagement and equity-centered programming.** Communities hold immense knowledge on chronic challenges, unmet needs, and emerging issues in their neighborhoods. By collaboratively assessing the state of city services, infrastructure conditions, and opportunities for innovation, priority programs can be identified that work to improve equity and quality of life. Section 3 offers a range of strategies for community engagement that can be adjusted to local contexts.

4. **Consider regional partners or other collaborative opportunities.** Regional programs, cross-sector collaborations, and public-private partnerships all play a role in achieving a low-carbon, resilient future. Section 4 highlights funding for regional planning programs.

SECTION ONE
CLIMATE & RESILIENCE PLANNING IN THE SOUTHEAST

While much of the Southeastern United States may not be widely recognized for its climate adaptation and mitigation initiatives, our research unveiled and compiled almost 150 ongoing efforts in nearly 40 cities. From this review, we created an [interactive map](#) and a reference list (Appendix A) that details resiliency plans produced by local government entities in 12 Southeastern states.

Each of the listed resiliency plans can be separated into two categories: direct and indirect. The direct category features cities that have worked to identify climate change head-on by creating plans that intentionally address the ramifications of climate change. These cities include Jacksonville, FL, Miami, FL, Tampa, FL, Atlanta, GA, Louisville, KY, New Orleans, LA, Kansas City, MO, St. Louis, MO, Raleigh, NC, New Bern, NC, Charleston, SC, Columbia, SC, Memphis, TN, Virginia Beach, VA, and Norfolk, VA. The rest of the cities indirectly address climate change by including climate adaptation and mitigation strategies within comprehensive sustainability or development plans. These strategies include high-density development along greenways, pedestrian infrastructure, tree canopies, brownfield remediation, and other forms of sustainable development.

SEAP STATES

CITY PLANS

This map contains the most recent relevant resiliency plans published by local governments in the Southern United States. The plans are accessible in Appendix A or on the [interactive map](#).

There were a few cities in particular that stood out. New Bern, NC has a population of just under 30,000, and yet it has climate action plans comparable to densely populated cities such as Miami, FL. Due to its coastal proximity and elevation, New Bern has been repeatedly impacted by hurricanes and is working to ensure they are ready to respond to future extreme weather events while also coordinating to reduce the impact felt by cities all along the Pamlico Sound. Another city of note is Norfolk, VA, a city facing several compounding challenges related to population decline and rising poverty rates. Since the early 2000s, Norfolk city officials have implemented a number of adaptation and mitigation plans to address coastal risks and hazards. While working to help alleviate poverty-stricken communities, the city government has continued to implement resiliency plans that are low-cost and community-centric. In addition to cities such as these developing coastal resilience strategies, many land-locked cities are focusing on community-engaged green initiatives to address rising average temperatures and heat

stress. As a result, these densely developed urban areas will absorb less heat (called the urban heat island effect) and reduce heat-related illnesses.

SECTION TWO
DECISION MATRIX FOR CLIMATE PROGRAMMING & INVESTMENT

The review of climate, resilience, and sustainability plans throughout the Southeast identified common strategies and goals for reducing greenhouse gas emissions and enhancing resilience. The chart below summarizes the common goals that may be eligible for funding under the BIL (organized by emissions reduction strategies and resiliency strategies) and highlights potential co-benefits. This list identifies funding for local level governments and metropolitan planning agencies, but a complete list of funding opportunities for state, local, and Tribal governments that can be used to fund climate-related investments is available in Appendix B.

GHG Emissions Reduction Initiatives					
Strategy	Equity Co-benefits	Resiliency Co-benefits	Available Funding	Funding Type	New Program
Transportation					
Low and zero-emission vehicles	Indirect	Electric vehicle batteries to provide back-up power	• Charging and Fueling Infrastructure Grants • Clean School Bus Program • Low or No Emission (Bus) Grants* • Electric Drive Vehicle Battery Recycling And 2nd Life Apps	Grant Grant Grant CA	Yes Yes No Yes
Public transit	Direct and Indirect	Connectivity ensures equitable mobility for all during emergencies	• Rebuilding American Infrastructure Sustainability and Equitably (RAISE) Grants • Bus & Bus Facilities Competitive Grants* • Capital Investment Grants (Public Transportation) • Research, Development, Demonstration and Deployment Projects • Urbanized Area Formula Grants • Technical Assistance and Workforce Development • All Stations Accessibility Program • Enhanced Mobility for Seniors and Individuals with Disabilities • Pilot Program for Transit-Oriented Development Planning • Appalachian Development Public Transportation Assistance Program • Metropolitan Planning Program	Grant Grant Grant Grant Grant Grant Grant Grant Grant Grant Grant	No No No No No No No No No No No
Multi-modal mobility	Direct and Indirect	Can include transportation system vulnerability assessments and resilience investments	• National Infrastructure Project Assistance (MEGA) • Infrastructure for Rebuilding America (INFRA) Grant Program • Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD) Program • Safe Streets and Roads for All • Rural Surface Transportation Grant	Grant Grant Grant Grant Grant	Yes No No Yes Yes

Energy					
Clean energy	Indirect	Distributed generation facilities and microgrids can reduce the impact of shocks and disruptions	• Grants for Energy Efficiency and Renewable Energy Improvements in Schools • Regional Clean Hydrogen Hubs • Natural Gas Distribution Infrastructure Safety and Modernization Grants	Grant Grant Grant	Yes Yes Yes
Energy efficiency	Indirect	Weatherization and other energy efficiency measures can reduce the impact of disruptions	• Energy Efficiency and Conservation Block Grants • Grants for Energy Efficiency and Resilience Code Adoption • Weatherization Assistance Program*	Grant Grant Grant	Yes Yes No
Targeted Programs					
Modernization	Direct and Indirect	Assessments associated with modernization and upgrades can identify potential climate related vulnerabilities	• Appalachian Area Development • Delta Regional Authority	Grant Grant	No No
Industrial emissions	Direct		• Industrial Emission Demonstration Projects	CA	Yes

* Programs included in the Justice40 initiative | CA (Collaborative Agreement)

Resilience Initiatives					
Strategy	Equity Co-benefits	GHG Mitigation Co-benefits	Available Funding	Funding Type	New Program
Infrastructure Resilience					
Energy sector resilience	Direct and Indirect	Low-carbon electrification and energy efficiency	• Port Infrastructure Development Program Grants • Energy Improvement in Rural or Remote Areas • Building Resilient Infrastructure and Communities • Program Upgrading Our Electric Grid and Ensuring Reliability and Resiliency • Rural And Municipal Utility Advances Cybersecurity Grant And Technical Assistance Program	Grant CA Grant Grant Grant Grant	No Yes No Yes Yes
Telecommunications security	Direct and Indirect	Low-carbon innovations and retrofits	• Middle Mile Grants Program • State and Local Cybersecurity Grant Program • Smart Grid Investment Grant Program and Energy Sector Operational Support For Cyber Resilience Program	Grant Grant Grant	Yes Yes Yes

Infrastructure upgrades, retrofits, and redevelopment	Indirect	Multi-model transportation planning	• State of Good Repair Grants • Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT) • Water Infrastructure Finance and Innovation • Bridge Investment Program • Metropolitan Planning (FHA) • Dam Safety Program	Grant Grant Credit Grant Grant Direct	No Yes Yes Yes No No
Hazard mitigation					
Water security	Indirect		• Emergency Watershed Protection Program • Watershed And Flood Prevention Operations • Desalination Projects • WaterSMART Grants	TA TA Grant Grant	No No No No
Flood mitigation	Direct		• Flood Mitigation Assistance (FMA) Grant* • Water & Groundwater Storage and Conveyance • National Culvert Removal, Replacement, & Restoration Grant	Grant FA Grant	No No Yes
Wildfire mitigation and recovery	Direct and Indirect		• Wildfire Management	Direct	No
Remediation	Direct		• Brownfields Remediation Program* • Superfund Remediation*	CA CA	No No
Nature-based solutions					
Watershed restoration and management	Indirect	Carbon sequestration	• Watershed Rehabilitation Program	FA/TA	No
Ecosystem restoration, stormwater management, and biodiversity preservation	Direct and Indirect	Carbon sequestration	• Fish Passage (Aquatic Ecosystem Restoration And Protection Projects) • Marine Debris (NOAA) • Delaware River Basin Conservation Act • Chesapeake Bay Program • Gulf of Mexico Program • Lake Pontchartrain Restoration Program • South Florida Geographic Initiatives Program	Grant Grant Grant Grant Grant CA Grant	No No No No No No No
Greenspace	Indirect	Carbon sequestration	• Healthy Streets • Wildlife Crossings Pilot Program	Grant Grant	Yes Yes
Community resilience					
Hazard mitigation	Direct	Capacity building for climate programs	• Building Resilient Infrastructure and Communities*	Grant	No
Redevelopment	Direct	Multi-modal mobility	• Reconnecting Communities • Water Infrastructure Improvements for the Nation Small and Underserved Communities Emerging Contaminants Grant Program	Grant Grant	Yes No
Planning	Direct	Capacity building for climate programs	• Community Wildfire Defense Grant Program	Grant	Yes

Information and communication	Direct		• Distance Learning, Telemedicine, And Broadband Program: ReConnect Program	Grant/ Loan	No
Training & capacity building	Direct	Capacity building for climate programs	• Appalachian Area Development • Delta Regional Authority	Grant Grant	No No

* Programs included in the Justice40 initiative CA (Collaborative Agreement), FA (Financial Assistance), TA (Technical Assistance), Credit (Credit Assistance), Direct (Direct Federal Funding)

Funding from the Bipartisan Infrastructure Law is available for: airports and Federal Aviation Administration (FAA) facilities; broadband; clean energy and power; electric vehicles, buses, and ferries; environmental remediation; passenger and freight rail; ports and waterways; public transportation; resilience; roads, bridges, and major projects; safety; water; and other programs for regional or sector-specific investments. Each of these categories offers co-benefits for climate change mitigation and adaptation.

Transportation and Energy
Greenhouse gas (GHG) emissions reduction programs can be financed primarily by funds available for energy and transportation initiatives. Funding that supports the transition to modern, decarbonized mobility systems is targeted for low or zero-emissions vehicles, public transportation, and multi-modal initiatives. Programs like the Rebuilding American Infrastructure with Sustainability and Equity (RAISE) discretionary grant program open opportunities to strategically modernize transportation networks to make them more accessible and connected to historically disadvantaged communities in rural and urban areas. Low-carbon transportation options (such as walking and biking paths) can be included in many of the infrastructure upgrades funded through programs such as the Bridge Formula Program administered by the Federal Highway Administration (the Federal-aid Essentials for Local Public Agencies provides guidance on FHA program funds).

Electric vehicles (EVs) are helping cities meet climate targets and improve air quality. A strategically placed and widely available charging infrastructure incentivizes the EV transition while also better connecting walking, biking, and public transit systems in dense urban areas. Electric vehicle adoption relies on an electric grid able to reliably provide low-carbon electricity at a reasonable cost. This increased dependence on electricity across critical infrastructure systems calls for greater investment in redundant sources of electricity that can withstand the increasing frequency and severity of climate-related hazards. Investments in energy system resilience include ensuring grid performance during events and securing the availability of critical materials needed for advanced energy solutions.

Energy sector programs lower emissions by increasing the number of projects dedicated to advanced energy solutions, energy efficiency, battery manufacturing, and reuse, green building technologies, carbon capture and storage, hydrogen technologies, hydroelectric, geothermal, solar, wind, and advanced nuclear. Funding for local government projects is limited in the BIL but a significant amount of funding for clean energy investments is available to state and Tribal governments (Appendix B). For example, programs like the

Energy Efficiency Revolving Loan Fund Capitalization Grant Program, still in development, will provide needed capital to energy and energy efficiency projects via state revolving funds.

Upgrades, retrofits, rehabilitation, and modernization projects all open opportunities to conduct climate change risk assessments to ensure projects implemented now are resilient to the impact of climate-related hazards and risks for decades to come. The impact of climate change on transportation systems can include changes to coastal topography that destabilizes road and rail networks, increases in service disruptions, and more frequent damage from natural disasters. There is a need to assess vulnerabilities, modernize systems, and upgrade infrastructure to ensure transportation systems remain functional and accessible. These assessments can work to ensure vulnerable groups, including individuals with disabilities and seniors, are not disproportionately impacted by climate-related hazards.

Hazard and Risk Reduction
Funding is also available to address specific risks and hazards associated with climate change. State and local governments can use the funding to mitigate the risks associated with flooding, wildfires, droughts, and storm events by investing in infrastructure upgrades and other preparedness initiatives. Climate projections suggest the Southeast will experience increased frequency and severity of hurricanes and flooding associated with sea-level rise. Funding is available to reduce the risk of flood and storm damage to ports and waterways, commercial navigation projects, and other urban flood management systems such as retention tanks and conveyance systems. Although the Southeast is not projected to be as impacted by increasing wildfires as other regions, funding for wildfire detection, community preparedness, and firefighter training is available for at-risk areas. County-level information on hazards and risks is available from the interactive National Risk Index for Natural Hazards.

Ecosystem Restoration and Nature-Based Solutions
Ecological and ecosystem restoration offer numerous co-benefits for resilience and carbon mitigation. Healthy ecosystems and habitats promote resilience by offering nature-based solutions to flooding and stormwater management while also helping sequester atmospheric carbon. Additionally, green spaces help cool cities and mitigate the impact of increasing temperatures and the absorption of heat by urban buildings and infrastructure (the urban heat island effect). Funding is available to restore marine and coastal habitats and to address invasive species that impact ecosystem function. Region-specific funding for restoration is available for several areas of the Southeast, including the Gulf of Mexico, Lake Pontchartrain, South Florida, and the Chesapeake Bay.

Frontline communities are often defined as neighborhoods directly adjacent to or bordering areas with known or suspected hazards such as environmental contamination or climate-related risks and hazards. Investing in environmental remediation helps ensure frontline communities will not be disproportionately harmed by leaks or flood events. Federal funds are available for environmental remediation and training for the removal and management of hazardous materials, including emerging contaminants such as PFAS.

Other Critical Infrastructure
Extreme events associated with climate change can disrupt essential telecommunications services. Federal support for broadband investments can help ensure public and commercial sector connectivity is resilient to climate-related threats. Low-income households, particularly those in rural and tribal communities, are less able to access and share information on short-and long-term strategies for reducing vulnerability to climate events. In addition to the broadband funds available from the BIL, the Digital Equity Act works to ensure individuals and communities not only have access but are also supported in the development of the skills and capacity needed to thrive in the digital economy.

Water and sanitation systems are especially vulnerable to climate-related shocks and hazards. Additional funds for water infrastructure resilience are available to local governments through the Clean Water State Revolving Funds and the Drinking Water State Revolving Funds. These funds are eligible for use in construction projects for water distribution, wastewater, and stormwater treatment facilities and collection systems, pollution management, and nature-based solutions. More information on using the State Revolving Funds for nontraditional investments is available in the EPA report Financing Options for Nontraditional Eligibilities in the Clean Water State Revolving Fund Programs.

SECTION THREE
CENTERING EQUITY IN CLIMATE PROGRAMMING

Growing support for policies that directly address environmental justice is evident at all levels of government. President Biden recently launched the Justice40 initiative (Executive Order 14008) that supports an equitable response to environmental challenges by committing to a government-wide effort to deliver 40% of the overall benefits of investment to disadvantaged communities. States have also passed or proposed legislation on environmental justice, such as California's Climate Investments for disadvantaged communities that served as a model for Justice40, New Jersey's Environmental Justice Law (2020), and Maryland's proposed Climate Crisis and Environmental Justice Act. Local government action is also evident in Austin's Climate Equity Plan, which aims to comprehensively engage communities as the city strives to equitably reach net-zero emissions by 2040.

The Justice40 initiative, beginning with 21 existing programs[1], will initially support new strategies for equitable programmatic implementation, labor standards, and stakeholder and community engagement. A detailed analysis of how the Justice40 initiative applies to BIL investments can be found in the Roosevelt Institute report Justice40 and the Federal Budget: Challenges of Scale and Implementation. Additional resources to help identify disadvantaged communities are available from the new Climate and Economic Justice Screening Tool released by the Council on Environmental Quality. This section offers general guidance on strategies for community engagement and equity evaluation for infrastructure investment that improves the quality of life in the most burdened communities while also reducing emissions and enhancing resilience. Information for communities interested in applying for funding from the Justice40 initiative is available from network organizations like the Justice40 Accelerator that are working to ensure the aims of the initiative are realized and that communities are supported in gaining access to needed funds.

Community Engagement
This section summarizes strategies for strengthening community engagement and collaboration practices for equitable investment that works to ensure disadvantaged communities are engaged in program planning and investment. Although the definition of disadvantaged communities varies, groups typically included are low-income communities, those impacted by systemic socio-economic disparities such as indigenous communities, communities of color, and ethnic minorities, as well as frontline communities disproportionately burdened by pollution or vulnerable to the impacts of climate change.

Equitable climate mitigation and resilience initiatives are built on shared knowledge and collaborative planning and implementation practices. The level of engagement is often portrayed as a continuum that ranges from one-way information sharing to fully collaborative, community-managed programs. Examples of community engagement along

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[1] Justice40 programs receiving BIL funding are indicated in the tables in Section 2

this spectrum vary based on context and local resources. Still, illustrative examples - including engagements that took place during the preparation of sustainability or resilience action plans—are included in the table below.

Continuum of Community Engagement		Examples
Inform	Government provides information necessary for communities to make informed decisions and take action	New York City Hazard Mitigation, Community Risk Assessment Dashboard North Carolina Floodplain Mapping Program Miami-Dade Climate Action Strategy City of Tampa, Coastal Area Action Plan City of Greensboro, Sustainability Action Plan City of Charleston, Climate Action Plan City of Virginia Beach, Sea Level Wise Adaptation Strategy
Consult	Government obtains feedback or input on specific issues to inform decision-making	City of Chicago, Climate Action Plan Survey NYC Environmental Justice for All Public Comment Period Miami-Dade County Office of Resilience Virtual Discussions and Public Meetings City of Fayetteville, City Plan 2040 Comprehensive Plan City of Miami, Comprehensive Stormwater Masterplan City of Raleigh, Capital Area Greenway Masterplan
Involve	Government leads a process to deepen understanding of community issues and develop plans based on community priorities	FEMA & Texas A&M, CHARM Mapping Platform for Hazard Mitigation Participatory Mapping, Calumet, Cook County Urban Flooding Baseline Project Colorado Resiliency Office, Community Readiness And Resilience Toolkit Santa Rosa Community Empowerment Plan City of Miami, Miami Forward Climate Ready City of Memphis, Memphis 3.0 City of Louisville, Prepared Louisville: Building a Climate Resilient City for All City of New Bern, Resilience & Hazard Mitigation Plan City of New Orleans, Comprehensive Recovery Plan
Collaborate	Co-development of priority programs with authority and management shared between communities and government	Northampton, Massachusetts, Community Resilience Hub City of Milwaukee, Green Jobs and Community Collaboration
Empower	Community-led programs designed, implemented, or scaled up with government support	California Transformative Climate Communities California Community Assistance for Climate Equity Program Baltimore Green Space Acterra Community-based Vulnerability Planning Pilot Project City of Cupertino Block Leader Program East Capitol Urban Farm City of Tampa, Resilient Tampa City of New Orleans, Lot Next Door City of Baton Rouge, Pedestrian and Bicycle Master Plan City of Raleigh, Raleigh Community Climate Action Plan

Community engagement in the early stages of program development helps facilitate multi-stakeholder dialogue while enhancing transparency and accountability. There remains a need to improve government capacity to use local knowledge to effectively target plans and programs where they are most needed. Tools that help local-level government staff meaningfully engage communities include digital tools such as participatory mapping. Interactive mapping activities help facilitate two-way knowledge sharing by documenting valuable insights from communities while at the same time providing useful information on climate-related hazards.

Assessing Equity

Uneven investment in infrastructure perpetuates historical disparities between communities. While some funding, such as the Low-Income Home Energy Assistance Program, is specifically for low-income households in need of assistance with their heating and cooling energy costs, bill payment assistance, energy crisis assistance, weatherization, and energy-related home repairs, much of the funding available from the BIL only indirectly benefits disadvantaged communities.

Programs like Justice40 and similar state-level initiatives have the potential to direct substantial investment in climate mitigation and adaptation programs that directly benefit disadvantaged communities. Assessing the equity impact of infrastructure investment is essential to ensure investments do "no harm," as called for by the White House Environmental Justice Advisory Council. There are many approaches for calculating the impacts of infrastructure investment specifically in relation to disadvantaged communities - both separate from or integrated with standard cost-benefit analysis. Among these approaches, equity scoring can be used to compare outcomes in the vulnerable, frontline, and historically disadvantaged communities across programs.

Equity scoring for infrastructure projects is used (1) to evaluate compounding disparities in economically disadvantaged neighborhoods and (2) to design strategies for enhancing social co-benefits from infrastructure investment. Approaches to equity scoring typically include:

- Development of a set of indicators that can be used to identify disadvantaged communities and the development of a score representing cumulative or compounding vulnerabilities. See example indicators developed for New York's Climate Act here as well as data available through the Environmental Protection Agency's EJScreen tool.
- A description of a project or plan and a statement of specific objectives;
- Engagement and substantive input from the community;
- Calculation of direct and indirect economic, environmental, and social benefits of the project for disadvantaged communities. State and federal agencies are working to identify methodologies for calculating investment benefits accruing to disadvantaged communities and formulas will vary by sector and relevant equity criteria. The Energy Justice Dashboard provides an example of the initial efforts of the U.S. Department of Energy to track investment in disadvantaged communities.

This information is then used to develop policies, projects, and implementation plans that work proactively to target investment in disadvantaged and frontline communities while also safeguarding against programs that worsen inequities. Additional resources for developing approaches to equity scoring are included in Appendix C.

Why adopt an equity scoring approach to climate investment?

Climate change will drive both chronic stress and natural disasters that will impact human welfare. These impacts include damage to manmade and natural environments as well as disruptions to livelihoods. By incorporating equity scoring within infrastructure planning and program development, a more accurate representation of potential costs and benefits is developed while also creating procedures for monitoring and evaluating equity outcomes over time. The following practices are key in targeting equitable investment and optimizing outcomes:

- Collecting and analyzing data on hazards, risks, and social vulnerability;
- Establishing effective community engagement practices and providing opportunities for participatory budgeting and community-driven program design;
- And creating (1) transparent systems for monitoring impacts and (2) adaptive management strategies able to adjust to changing needs over time.

SECTION FOUR
REGIONAL COLLABORATION

Chronic and acute climate-related events that impact highways, airports, ports, and waterways occur across local jurisdictions and state boundaries. Much of the BIL funding is available first to states and then to cities and local governments. Coordination between local and Tribal governments, states, and regional offices will be necessary to upgrade and modernize transboundary infrastructure systems. Regional or metropolitan planning agencies can receive funding and then coordinate across stakeholders. For example, multi-modal and multi-jurisdictional projects of regional or national significance can access funding through certain targeted programs, including the National Infrastructure Project Assistance ("Megaprojects" or MEGA).

Airports, ports, and multimodal hubs are essential service providers for cargo, private sector stakeholders, as well as global and local communities. Climate-related deterioration or damage to airport and port facilities can create delays and cancellations that have far-reaching impacts on local economies and global supply chains. As climate-related impacts on airport infrastructure and operations will vary in severity, facilities are increasingly encouraged to conduct risk assessments and develop contextually appropriate risk mitigation plans. BIL funding for airports, ports, and waterways is available for capital improvements, multimodal terminals, and system upgrades. Construction or rehabilitation of transportation infrastructure for specific areas is also available for regional programs such as the 13-state Appalachian Region.[2]

Regional coordination is also necessary for programs supporting the rehabilitation and restoration of priority ecological areas such as the Gulf of Mexico. This program supports economic resilience in the region by restoring the health and productivity of the Gulf. The Gulf of Mexico Hypoxia Task Force works with regional partners to reduce nutrient loading to the Gulf of Mexico from the Mississippi basin. Additional funding to ensure the resilience of economies tied to the navigability of the Mississippi River is available through programs for infrastructure upgrades of ports and waterways.

The Southeast Crescent Regional Commission[3] (SCRC) and the Delta Regional Authority[4] (DRA) facilitate the allocation of BIL funding to existing programs for certain infrastructure improvements as well as workforce development. To ensure economic resilience in the South Florida region, the South Florida Geographic Initiatives Program provides competitive grants to address ecological threats to nearshore waters, bays, estuaries, beaches, and coral reefs. State infrastructure coordinators are available to assist in the application process for these programs. Funding for Tribal communities is available specifically through Tribal Climate Resilience programs for adaptation and community relocation. Additional funding for climate-resilient transportation planning is available from the Tribal High Priority Projects Program.

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[2] Alabama, Georgia, Kentucky, Maryland, Mississippi, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Virginia, and West Virginia
[3] Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, and Virginia
[4] Alabama, Arkansas, Illinois, Kentucky, Louisiana, Mississippi, Missouri, and Tennessee

CLOSING
NEXT STEPS

While this guide was designed to be a quick access point for identifying funding that can meet climate, resilience, and equity goals set by state and local governments, there will be continual updates on programs funded through BIL. Keep an eye on updates provided by the federal agencies that administer the programs to stay up to date on deadlines and new opportunities.

APPENDIX A

Representative climate, sustainability, and resilience plans in the Southeast

State	City	Plan Name	Date
Alabama			
	Huntsville	The BIG Picture - Downtown Master Plan	2017
		Greenway Plan	2020
		MPO Bikeway Plan	2021
		Energy and Greenhouse Gas Reduction Plan	2016
		TVA Sustainable Community Program	2016
	Birmingham	Comprehensive Plan	2012
	Montgomery	Envision Montgomery 2040	2020
		Year 2040 Long Range Transportation Plan	2015
	Mobile	Map for Mobile	2017
Arkansas			
	Little Rock	Master Street Plan	2018
		Master Trail Plan	2017
		2025 and Beyond Sustainability Action Plan	2020
	Fayetteville	City Plan 2040 Comprehensive Plan	2020
		Drainage Improvement Plan	2018
		Active Transportation Plan	2014
		Energy Action Plan	2017
	Fort Smith	Propelling Downtown Forward	2017
Florida			
	Jacksonville	Brownfield Program	2020

		Conservation/Coastal Management	2020
		Pedestrian Bicycle Masterplan	2017
		2030 Comprehensive Plan	2020
		Wetlands, Water Quality and Listed Species	2018
	Miami	Resilient 305	2019
		Miami-Dade Climate Action Strategy	2021
		Miami Forward Climate Ready	2020
		Stormwater Master Plan	2021
		Comprehensive Stormwater Masterplan	2021
		Miami Forever Bond	2018
		Forever Carbon Neutral	2021
	Tampa	Coastal Area Action Plan	2021
		Resilient Tampa	2021
		Sustainable Infrastructure Plan	2021
Georgia			
	Atlanta	Resilient Atlanta	2019
		Climate Action Plan	2015
		Green Infrastructure Strategic Action Plan	2018
		Comprehensive Development Plan	2021
		Clean Energy Atlanta	2019
	Columbus	Trees Columbus Canopy Restoration Project	2020
		2038 Comprehensive Plan	2018
		Stormwater Management Program	2017
	Augusta	Envision Augusta Comprehensive Plan	2018
		Stormwater Management, Green Infrastructure and Low Impact Development Program	2018
Kentucky			
	Louisville	Plan 2040	2018
		Transportation Master Plan	2019
		Prepared Louisville: Building a Climate Resilient City for All	2020
		Greenhouse Gas Emissions Reduction Plan	2020

		Urban Heat Island Project	2020
		Resilient Louisville	2019
	Lexington	Imagine Lexington	2018
		Environmental Services	
	Bowling Green	Riverfront Park Development Project	2021
		Bowling Green Transit Study	2021
Louisiana			
	New Orleans	Climate Action for a Resilient New Orleans	2017
		Gentilly Resilience District Creative Engagement and Communications Plan	2020
		FOR ME, "Lot Next Door"	2020
		Growing Green	2018
		Comprehensive Recovery Plan	2022
	Baton Rouge	FUTUREBR	2018
		Brownfields Program	2020
		Pedestrian and Bicycle Master Plan	2020
		Geaux Green 2020	2022
		Stormwater Master Plan Implementation Framework	2018
	Shreveport	Cross Bay Brownfield Area Wide Plan	2015
		Fall 2021 Clean Water Report	2021
		Water Master Plan	2021
Mississippi			
	Jackson	Fabric Jackson Comprehensive Plan	2021
		Open Streets Program	2021
		ONELINE	2020
		Fertile Ground	
	Gulfport	Flood Protection Information	2021
	Southaven	Experience 2040	2020
North Carolina			
	Charlotte	2040 Comprehensive Plan	2020
		2030 Transit Corridor System Plan	2019
		Strategic Energy Action Plan	2020

		Cross Charlotte Trail	2015
	Raleigh	2030 Comprehensive Plan	2019
		Raleigh Community Climate Action Plan	2021
		Capital Area Greenway Masterplan	2022
	Greensboro	GSO 2040 Comprehensive Plan	2020
		Sustainability Action Plan	2020
		Strategic Energy Plan	2022
	New Bern	Resilience & Hazard Mitigation Plan	2022
		Pamlico Sound Regional Hazard Mitigation	2020
		New Bern Repetitive Loss Areas	2020
		Emergency Operations Plan	2019
South Carolina			
	Charleston	Charleston Comprehensive City Plan	2021
		Flooding and Sea Level Rise Strategy	2019
		Climate Action Plan	2021
	Columbia	Columbia Compass: Envision 2036	2020
		Climate Protection Action Plan	2021
	Greenville	GVL 2040	2021
		Swamp Rabbit Trail Extension Master Plan	2020
		Sustainable GVL	2022
Tennessee			
	Nashville	NashvilleNext	2017
		Solid Waste Master Plan	2019
		Sustainability Advisory Committee Report	2021
	Memphis	Memphis 3.0	2021
		Memphis Area Climate Action Plan	2018
		Smart Memphis Plan	2021
	Chattanooga	Renewing Our Vision	2018
		Natural Resource Assessment	2019
Virgina			
	Virginia Beach	Sea Level Wise Adaptation Strategy	2020

		Master Transportation Plan	2018
		Active Transportation Plan	2021
		Comprehensive Plan	2017
	Norfolk	Plan Norfolk 2030	2021
		Climate Action Plan	2019
		Norfolk Resilience Strategy	2015
		A Green Infrastructure Plan for Norfolk	2018
	Arlington	Community Energy Plan	2019
		Stormwater Master Plan	2014
		Master Transportation Plan; Bicycle Element	2019
		Public Spaces Master Plan	2019
		Comprehensive Plan	2019
West Virginia			
	Charleston	Comprehensive Plan	2013
		Downtown Development Plan	2013
		Floodplain Management Program	2019
		Green Team Committee	2021
		Storm Water Management Plan	2018
		Bike Trail Master Plan	2016
	Huntington	Plan 2025: The Future of Huntington	2013
		Storm Smart Cities: Integrating Green Infrastructure into Local Hazard Mitigation	2018
		Stepup Create Huntington	2017
		Huntington Street Flooding Mitigation Plan	2017
		Marshall University Bicycle Plan	2019
	Morgantown	Comprehensive Plan	2013
		Green Team Strategic Plan	2018
		Source Water Protection Plan	2019

APPENDIX B

Additional funding resources for climate mitigation and resilience investment

Available for State, Local, and Tribal Governments			
Climate strategy	**Program Name**	**Funding Type**	**New Program**
Low-carbon energy & energy storage (New technologies, resilience, and energy security)	Battery Manufacturing and Recycling Grants Battery Materials Processing Grants Carbon Capture Demonstration Projects Program Carbon Capture Large-Scale Pilot Programs Carbon Dioxide Transportation Infrastructure Finance and Innovation Program Carbon Utilization Program Energy Improvement in Rural and Remote Areas Energy Storage Demonstration Pilot Grant Program Long-Duration Energy Storage Demonstration Initiative and Joint Program	Grant Grant Cooperative Agreement Cooperative Agreement Loan/Grant Grant Cooperative Agreement Grant Cooperative Agreement	Yes Yes Yes Yes Yes Yes Yes Yes Yes
Low-carbon transportation	Pilot Program for Transit Oriented Development	Competitive Grant	No
Infrastructure resilience and modernization	Rail Vehicle Replacement Grants Cyber Response and Recovery Fund	Competitive Grant Cooperative Agreement	Yes Yes

Available Only for States and/or Tribal Governments			
Climate strategy	**Program Name**	**Funding Type**	**New Program**
Infrastructure resilience	Airport Infrastructure Grants National Dam Safety Program National Highway Freight Program National Highway Performance Program Nationally Significant Federal Lands and Tribal Projects Transportation Infrastructure Finance and Innovation Act Tribal Transportation Program	Grant Direct Federal Spending Formula Grant Formula Grant Competitive Grant Loan Formula Grant	Yes No No No No No No
Modernization	Cyber Response and Recovery Fund State and Local Cybersecurity Grant Program	Contract, Grant, Cooperative Agreement	Yes
Climate risk and hazard communication	Broadband Equity, Access, And Deployment Program State Digital Equity Programs Tribal Broadband Connectivity Program	Grant Grant Grant	Yes Yes No
Low-carbon energy (New technologies, resilience, and energy security)	Battery and Critical Mineral Recycling Earth Mapping Resources Initiative Energy Auditor Training Grant Program New Solar Research & Development Pumped Storage Hydropower Wind and Solar Integration and System Reliability Initiative Solar Improvement Research & Development Solar Recycling Research & Development State Energy Program Wind Energy Tech Recycling Research & Development Wind Energy Technology Program	Grant Cooperative Agreement Grant Cooperative Agreement Cooperative Agreement Cooperative Agreement Cooperative Agreement Formula Grant Cooperative Agreement Cooperative Agreement	Yes No Yes Yes Yes No Yes No Yes No

Water and energy efficiency	Building Codes Implementation for Efficiency and Resilience	Grant	Yes
	Energy Efficiency Revolving Loan Fund Capitalization Grant Program	Grant	Yes
	Weatherization Assistance Program	Formula Grant	No
Low-carbon transportation and connectivity	National Electric Vehicle Infrastructure Formula Program	Formula Grant	Yes
	Consolidated Rail Infrastructure and Safety Improvement Grants	Competitive Grant	Yes
	Federal-State Partnership for Intercity Passenger Rail Grants	Competitive Grant	No
	Restoration & Enhancement Grant Program (Passenger and Freight Rail)	Competitive Grant	No
	Ferry Service for Rural Communities	Grant	Yes
	Public Transportation on Indian Reservations	Grant	No
	Formula Grants for Rural Areas	Grant	Yes
	Metropolitan, Statewide & Non-Metropolitan Planning	Formula Grant	No
	Strengthening Mobility and Revolutionizing Transportation (SMART) Grants	Competitive Grant	Yes
	Carbon Reduction Program	Formula Grant	Yes
	Congestion Mitigation & Air Quality Improvement Program	Formula Grant	No
Climate risk and hazard reduction (Including environmental remediation and pollution control)	Abandoned Mine Reclamation Fund	Grant	No
	Brownfields Categorical Grants	Cooperative Agreement	No
	Orphaned Well Site Plugging, Remediation, And Restoration	Grants/Direct Federal Spending	Yes
	Coastal Zone Management		
	Forest Health Management on Federal Lands Program and Forest Health Management on Cooperative Lands Program	Grant	No
		Grants/Direct Federal	No
	FEMA Hazard Mitigation Assistance	Grant	Yes
	Pollution Prevention Grants	Grant	No
	Tribal Climate Resilience	Contract/Compact	No
	Surface Transportation Block Grant Program (FHA)	Formula Grant	No
	Clean Water State Revolving Fund*	Grants/Loans	No
	Drinking Water State Revolving Fund*	Grants/Loans	No
	Drinking Water State Revolving Fund Emerging Contaminants (incl. PFAS)	Grant	No
	Drinking Water State Revolving Fund Lead Service Lines Replacement*	Grants/Loans	No
	Indian Health Service Sanitation Facilities Construction Program	Direct Federal Spending	No
Solid waste initiatives	Solid Waste Infrastructure for Recycling Infrastructure Grants	Cooperative Agreement	Yes
Ecosystem Restoration	Good Neighbor Agreements with States and Tribes	Agreement	No
	Gulf Hypoxia Action Plan	Grant	Yes
	National Estuarine Research Reserve System	Grant	No
	State Forest Action Plans	Grant	No
	Direct Federal Spending For Invasives	Direct Federal Spending	No
	Grants For States And Tribes For Voluntary Restoration	Grants	Yes
	Multi-Benefit Projects To Improve Watershed Health	Financial Assistance	Yes
Community resilience	Community Wildfire Protection Plan	Grant	Yes
	Tribal Climate Resilience	Contract/Compact	Yes
Skills and capacity building	On-the-Job Training Program (FHA)	Competitive Grant	No

* Programs included in the Justice40 initiative

APPENDIX C

Community engagement strategies for equity-driven climate investment

Guides	
Guide	**Developer**
Equity & Voice in Local Government Budgeting	Southern Economic Advancement Project (SEAP)
Guide to Equitable, Community-Driven Climate Preparedness Planning	Urban Sustainability Directors Network (USDN)
What Is Public Engagement, and Why Do It?	Institute for Local Government
Community Resilience Planning Guide for Buildings and Infrastructure Systems	National Institute of Standards and Technology (NIST)
Steps to Resilience	U.S. Climate Resilience Toolkit

Equity Scoring	
Guide	**Developer**
Racial Equity Toolkit An Opportunity to Operationalize Equity	Government Alliance on Race and Equity
Racial Equity Toolkit to Assess Policies, Initiatives, Programs, and Budget Issues	City of Seattle
Racial Equity Evaluation Tool	Equity Matters
Racial Equity Impact Assessment Toolkit	Race Forward
EJScreen: Environmental Justice Screening and Mapping Tool	U.S. Environmental Protection Agency (EPA)
CalEnviroScreen 4.0	California Communities Environmental Health Screening Tool

Additional Resources

- Equitable and Just National Climate Platform
- Deep South Center for Environmental Justice (DSCEJ)
- Center for Civic Innovation
- Collaborative Planning for Climate Resilience: An Integrated Science-based Framework for the San Diego Region, American Planning Association Regional and Intergovernmental Planning Division and Scripps Institution of Oceanography California - Nevada Climate Applications Program
- **Open-source participatory mapping platforms:** Umap, Geojson, DemocracyOS, Shareabouts, Map-Server, Crowdmap, and Crowdgauge
- **Paid participatory mapping platforms:** Citizenlab, Ideascale, Mapping for Change, Maptionnaire, MetroQuest, MinStad, Neighborland, OurMK, Social Pinpoint, TransformCity, Urban Interactive Studio

AUTHOR BIOGRAPHIES

ALLISON BRIDGES is a Lecturer of Sustainability Management at Columbia University and of Environmental Policy at Emory University. Holding a Ph.D. in Urban Planning and Policy, her research explores environmental policy and planning, urban sustainability, and climate resiliency. Having recently completed a Postdoctoral Fellowship with Columbia's Earth Institute and a Fellowship with the NYC Mayor's Office of Climate Resiliency, she continues to work in applied settings developing urban sustainability and resiliency initiatives. Prior to her doctoral studies, she worked in infrastructure development for the World Bank and in disaster relief for the World Health Organization.

SIERRA SCOTT is a Master of City and Regional Planning Candidate, and a Graduate Research Assistant at Georgia Tech. With a concentration in Land Use, her interests lie in the interdependence between institutions, and the resulting impact on environmental sustainability, equity, and economic development. The scope of her research includes climate adaptation and mitigation, resiliency, environmental policy, and urban resilience. After her expected graduation in May of 2023, she will continue to engage in resiliency work.

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